South Carolina
Alternate Assessment
(SC-Alt)

South Carolina's Alternate Assessment, SC-Alt
Spring 2007 Operational Administration

Technical Report
Unedited Draft
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American Institutes for Research
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Introduction

This report details the design, development, and spring 2007 operational test results for the South Carolina Alternate Assessment (SC-Alt). The SC-Alt assessment consists of four content areas: English language arts (ELA), mathematics, science, and social studies. The assessments are administered across three grade bands: 3–5, 6–8, and 10.

The first chapter of this Technical Report describes the background of the alternate assessments in South Carolina, the format of the previous assessments, and the need for a new alternate assessment.

The second chapter is comprehensive in its scope and includes information on the design of the alternate assessment and the development of tasks and items to measure academic growth among students with significant cognitive disabilities. The field-test designs are also reviewed in the second chapter.

Chapter 2 further reviews how the design of the alternate assessment is unique in that through the use of a Student Placement Questionnaire (SPQ) it maximizes the efficiency of teacher and student testing time by guiding the teacher to administer tasks at a complexity level that is appropriate for the achievement level of an individual student. A thorough review of the SPQ is presented in Chapter 2.

Chapter 2 also reviews how the design of the assessment allows for the development of a vertical scale by linking grade-appropriate tasks across grade levels and complexity levels within grades. A vertical scale presents many benefits to the assessment system; these benefits will be discussed later in this Report in the sections on scaling and score reporting.

The third chapter details the spring 2007 operational test administration in ELA, mathematics, and science, test administrator training, use of the Student Placement Questionnaire (SPQ), measures taken to ensure the accuracy of scoring, and the maintenance of test security.

The fourth chapter describes the standard-setting procedures conducted to establish performance standards. The chapter includes a description of the Item-Descriptor (ID) Matching procedure, the goals of the standard-setting workshop, the composition of the standard-setting panels, the workshop activities, and the panels' recommended performance standards.

The fifth chapter reviews several technical topics, including analysis and scaling and the reliability of test scores. This chapter includes a description of the procedures used to calculate internal consistency reliability estimates and classification accuracy estimates.

The sixth chapter describes the score reporting system for SC-Alt and references the Individual Student (Family) Report (included in Appendix H) from which the summary reports are derived. The chapter provides a brief description of the score reports, their intended uses, and the information they contain.

The seventh chapter provides an overview of statewide achievement on the SC-Alt based on the spring 2007 operational test administration.

The eighth chapter reports on content validity and convergent and discriminant validity topics as well as the validity of the Student Placement Questionnaire (SPQ) and an investigation of the relationship of engagement item scores to proficiency levels.

Chapter 1: History of the Development of Alternate Assessment in South Carolina

Overview of the State Assessment System

The South Carolina Assessment System includes the South Carolina Palmetto Achievement Challenge Tests (PACT), the High School Assessment Program (HSAP), the End-of-Course Examination Program (EOCEP), and the South Carolina Readiness Assessment (SCRA). These state-level assessments are required by the Education Accountability Act of 1998 (EAA) and are aligned with the state's academic standards for each subject and grade level.

- PACT measures the performance of all public school students in grades 3 through 8 in the content areas of English language arts (ELA), mathematics, science, and social studies.
- HSAP measures the performance of high school students in ELA and mathematics and is used both as one criterion for eligibility to receive a high school diploma and as the primary source for reporting the federally mandated data required by the No Child Left Behind Act (NCLB).
- EOCEP is administered in gateway courses at the high school level. The physical science EOCEP examination is counted for participation purposes for NCLB reporting.
- SCRA, an assessment of student readiness, is administered to students in kindergarten and first grade. This is a teacher rating scale and the results are not included in the state accountability system.

The EAA establishes a performance-based accountability system that includes all students. This act supports South Carolina's commitment to public education and a conviction that high expectations for all students are a vital component of improving academic education.

The goals of the state assessment system are as follows:

- ***increasing academic performance of all children and, ultimately, raising high school graduation rates;***
- ***implementing rigorous academic achievement standards that are aligned with the South Carolina curriculum standards;***
- ***improving instruction based, in part, on the implementation of these higher standards; and***
- ***using the results of challenging assessments that measure student performance relative to these standards.***

Another goal is to inform various audiences—teachers, school administrators, district administrators, South Carolina State Department of Education (SCDE) staff, parents, and the public—of the status of academic performance and of the progress of public school students toward meeting South Carolina's academic achievement standards.

The South Carolina academic standards form the basis for alignment across the state education system for district and school curricula, classroom instruction, units of study, and learning experiences. The academic standards are the basis for all assessments in the state assessment system, including alternate assessment.

Overview and Purpose of the South Carolina Alternate Assessment

The South Carolina alternate assessment system received *Full Approval with Recommendations* from the U.S. Department of Education (USDOE) under Title I of the *Elementary and Secondary Education Act* (ESEA) as amended by the *No Child Left Behind Act of 2001* (NCLB) in February 2006, following Peer Review. The letter of approval stated that the alternate assessment met essential regulatory requirements but recommended strengthening the alternate assessment. SCDE had already begun to address revisions to the alternate assessment system on the basis of experience with the existing system and a better understanding of the requirement to align instruction and assessment to grade-level academic standards.

The purpose of the alternate assessment based on alternate achievement standards is to capture and evaluate the performance of students who have traditionally been excluded from statewide testing programs and to improve instruction for these students by promoting appropriately high expectations and the inclusion of these students in state accountability for district report cards and for Adequate Yearly Progress (AYP) reporting at the school, district, and state levels.

Description of the South Carolina Alternate Assessment

The SC-Alt is administered to students who have been determined by the individualized education program (IEP) team to be unable to participate in the general state assessments even with appropriate accommodations. It is an alternate assessment on alternate achievement standards to the PACT for students in grades 3-8 and the HSAP and Physical Science EOCEP for high school students. An alternate scoring format is provided for the SCRA for students who are the ages of typical students in kindergarten and first grade. Information regarding the alternate scoring may be found in the SCRA documentation.

The test is administered to students who meet the participation criteria for alternate assessment and who are of the ages of typical students in grades 3–8 and 10. Students who are ages 8–13 (the typical ages for grades 3–8) are assessed in ELA, mathematics, science, and social studies. Students who are age 15 (the typical age of students in grade 10) are assessed in ELA, mathematics, and physical science.

The SC-Alt consists of a series of performance tasks that are scored by the test administrator (teacher) as they are administered. The performance tasks are scripted activities and each task contains four to eight related items. The items have a scaffolded scoring script to reduce the complexity of the item when students do not respond successfully on the first attempt. All items are linked to the South Carolina academic content standards through the South Carolina Alternate Assessment Standards and Measurement Guidelines (ASMGs). The ASMGs are linked explicitly to the South Carolina academic standards for grades 3–8 and 10, although at less-complex or prerequisite levels.

The SC-Alt has three forms: elementary, middle, and high school. Students are assigned to forms on the basis of their age on September 1 of the tested year. Students who are ages 8–10

are assigned to the elementary school form, students who are ages 11–13 are assigned to the middle school form, and students who are age 15 participate in the high school form.

The assessment is designed to minimize teacher and student testing burden by administering only those items that are well-suited to a student's achievement level. The test administrator completes a Student Placement Questionnaire (SPQ) to determine the most appropriate starting task for the student. Tasks are arranged in order of difficulty (from easiest to most difficult). Once the appropriate starting task is identified, test administrators continue to administer tasks until the student no longer can respond successfully.

The first operational administration of the SC-Alt was conducted during a seven-week testing window during the spring of 2007, in ELA, mathematics, and science. A census field test was conducted during the same assessment window for social studies. Documentation related to the 2007 operational administration is the focus of this Technical Report.

Background on Alternate Assessment Development in South Carolina

The 1997 amendments to the Individuals with Disabilities Education Act (IDEA 97) created the mandate to include all children, including children with significant disabilities, in state testing and accountability systems. The vision for the South Carolina alternate assessment system was initiated in early 1998 in response to the IDEA 97 regulations. This vision has driven the development and revision of alternate assessment in South Carolina.

A core team of staff from the SCDE Offices of Exceptional Children, Assessment, Research, and Curriculum and Standards met in March 1998 to develop a plan for designing an alternate assessment to meet the IDEA mandate and to be included in the state assessment system. Initial steps were convening a steering committee and seeking technical assistance from the Mid-South Regional Resource Center (MSRRC) to explore strategies for designing an alternate assessment.

The Alternate Assessment Steering Committee was convened on May 12, 1998, to assist SCDE in determining how to include students with significant cognitive disabilities in statewide assessments. The committee comprised parents, special education and general education teachers, administrators, and representatives from other agencies. Dr. Ken Olsen with MSRRC provided the committee with technical assistance, including information on IDEA requirements, examples of options that some states were using or considering, and research available on alternate assessment. He facilitated a process that allowed the Steering Committee to reach shared foundational beliefs; address eligibility criteria and content and performance standards; and develop plans.

To ensure that all students, including students with significant disabilities, are included in the testing and accountability systems and have appropriate access to instruction in the South Carolina academic standards, the Steering Committee determined that the alternate assessment would be based on the following principles:

- All children can learn, be expected to meet, and be challenged to meet high standards.

- Special education is an extension and adaptation of the general education program and curriculum, rather than an alternate or separate system.
- The South Carolina State Board–approved standards are the foundation for all students, including students with unique needs and abilities.
- Measurement and reporting must be defensible in terms of feasibility, validity, reliability, and comparability.
- Results of the state standards-based program must be used to improve planning, instruction, and learning.
- An alternate assessment is appropriate for the few students for whom the state assessment, even with accommodations, is not appropriate.
- The alternate assessment is designed for a diverse group of students and should be flexible enough to address their individual needs.

The committee articulated these goals for the alternate assessment:

- to provide evidence that students have acquired the skills and knowledge necessary to become as independent as possible;
- to document the student's performance and the performance of the programs serving the student;
- to merge instructional "best practice," instruction in state standards, and assessment activities; and
- to provide information in the development of curriculum that is responsive to the student's needs.

The Steering Committee created the following participation guidelines to guide IEP team decisions regarding the students who should participate in the alternate assessment:

- The student demonstrates a significant cognitive disability and adaptive skills, which result in performance that is substantially below grade-level achievement expectations even with the use of accommodations and modifications;
- The student accesses the state-approved curriculum standards at less complex levels and with extensively modified instruction;
- The student has current adaptive skills requiring extensive direct instruction and practice in multiple settings to accomplish the application and transfer of skills necessary for application in school, work, home, and community environments;
- The student is unable to apply or use academic skills across natural settings when instructed solely or primarily through classroom instruction; and
- The student's inability to achieve the state grade-level achievement expectations is not the result of excessive or extended absences or social, cultural, or economic differences.

NOTE: The term *significant cognitive disabilities* was added by the South Carolina Alternate Assessment Advisory Committee to the criteria after the passage of the NCLB December 2003 regulations on alternate assessment.

The Steering Committee recommended that the state develop a portfolio collection of evidence of student progress toward the South Carolina academic standards similar in design to the Kentucky Portfolio Alternate Assessment. The committee also recommended that SCDE prepare a Request for Proposal (RFP) for a contractor to develop the alternate assessment. Advanced Systems in Measurement and Evaluation Inc. (ASME), which later became Measured Progress, was awarded the contract. This company, along with the Inclusive Large Scale Standards and Assessment (ILSSA) project at the University of Kentucky, began work with SCDE on the design of PACT-Alt.

A work group was convened to define the domain for instruction and assessment. To ensure that the South Carolina curriculum standards were the foundation for all students, including students with unique needs and abilities, adaptations of the curriculum standards were developed by this work group of special education teachers, regular education teachers, parents, administrators, higher education personnel, representatives from community agencies, and SCDE personnel. The work group process was facilitated by staff from MSRRC and focused on the prerequisite skills found primarily in the curriculum standards in pre-kindergarten through grade 2.

This work group affirmed that special education services must operate as an extension of the general education program and curriculum rather than as an alternate or separate system. The standards in this initial document were identified as concepts that every student, including students with moderate to severe disabilities, should know or be able to perform. These selected standards, which focused on skills that were deemed essential and attainable for every student, were directed toward the following goals:

- enhancing the quality of students' communication skills;
- improving the quality of students' everyday living;
- improving students' ability to function in society and promote in them an acceptance of and respect for self and others;
- preparing students for transition into adult living; and
- moving students toward independence, which may range from a level of self-care with assistance to total self-sufficiency.

The extensions were based on the state academic content standards in pre-kindergarten through grade 2. For each selected standard, examples of essential real-world performance skills were developed. The articulation of these performance skills was designed to provide the rationale for teaching the standards and to serve as guides for teachers and parents regarding what the skill "looked like" when a student demonstrated it. The committee specified that these performance skills could be accomplished in home, school, and community environments through a variety of individualized communication systems and might incorporate a variety of supports, such as physical assistance, physical prompts, verbal prompts, and technology. The document *The Extensions and Adaptations of the South Carolina Curriculum Standards for Students Participating in Alternate Assessment* became the focus of the portfolio assessment process, HSAP-Alt performance tasks, and the professional development training. In 2002, this document was revised and renamed the *Resource Guide to the South Carolina Curriculum Standards for Students in Alternate Assessment*, but it was still aligned to curriculum standards

for pre-kindergarten through grade 2. This work was based on the IDEA requirements and the thinking at the time about how students with significant cognitive disabilities should be included in the general education curriculum and assessment.

Beginning with the 2000–01 school year, students in grades 3–8 who met the participation criteria for alternate assessment were assessed with the portfolio assessment, PACT-Alt. In 2003, a high school assessment, HSAP, which was designed to meet AYP requirements, was added to the state assessment system, and an alternate to HSAP was developed to measure student proficiency in ELA and mathematics. A Stakeholder Committee with expertise in high school instruction of students with significant cognitive disabilities and academic standards was convened to guide the development of the high school alternate assessment, HSAP-Alt. The committee recommended designing an assessment based on performance on a series of tasks linked to the state curriculum standards. The HSAP-Alt consisted of a series of scripted performance tasks in ELA and mathematics with scaffolded administration and scoring procedures aligned with the *Resource Guide to the South Carolina Curriculum Standards for Students in Alternate Assessment*.

One critical piece of the development and implementation process of PACT-Alt and HSAP-Alt was the provision of intensive professional development related to standards-based instruction; much of it based on the work of Harold Kleinert and Jacqui Farmer Kearns. A resource for professional development was their book *Alternate Assessment Measuring Outcomes and Supports for Students with Disabilities.* Professional development was essential to the implementation of the portfolio assessment because the teacher was responsible for teaching a student the content related to the academic standards, assessing the student's progress, and providing evidence of the instruction and progress in the portfolio. Prior to the implementation of the alternate assessment and the IDEA requirement to include students with disabilities in the general education curriculum, many students with disabilities, especially those with significant disabilities, and their teachers had been excluded from standards-based instruction and professional development related to academic standards.

Transition from PACT-Alt and HSAP-Alt to SC-Alt

After seeking input on the vision of a new alternate assessment on alternate achievement standards from the Advisory Committee and teachers who were conducting alternate assessment, SCDE wrote an RFP for the redesign or design of the alternate assessment system. The design was to be consistent with the commitment of South Carolina to the instruction and assessment of students with significant cognitive disabilities and NCLB requirements. The focus was to be on grade-level academic standards. The new system was to address concerns related to teacher burden and time involved in assessment while supporting improved instruction based on state academic achievement standards. Extensive training for test administrators was to be integrated into the design of the assessment.

In September 2004, a contract was awarded to the American Institutes for Research (AIR) to assist the state in revising the alternate assessment. AIR managed the administration and analyses of the PACT-Alt and HSAP-Alt assessments during the 2004–05 and 2005–06

school years while developing the new alternate assessment, the South Carolina Alternate Assessment (SC-Alt), with SCDE.

American Institutes for Research

The American Institutes for Research (AIR) has more than 50 years of experience as a non-profit organization dedicated to assessment, behavioral science, and educational research. Subcontractors for the project include Measurement Incorporated, a leader in the field of hand scoring customized assessments and in printing, packaging, distribution, and retrieval services, and INSITE, a company with a long history of working with SCDE. AIR developed the South Carolina HSAP and the EOCEP programs and has enjoyed a successful collaboration with SCDE for a number of years.

Chapter 2: Test Development

The South Carolina academic content standards are the basis for alignment across the state for district and school curricula, classroom instruction, units of study, and learning experiences. The curriculum standards are the basis for the Palmetto Achievement Challenge Tests (PACT), the High School Assessment Program (HSAP), and the alternate assessment. An initial step in the design of the new assessment was developing Assessment Standards and Measurement Guidelines (ASMGs).

Development of the Assessment Standards and Measurement Guidelines

In April 2005, a committee comprising South Carolina special education teachers, content specialists, SCDE staff, and AIR staff designed the ASMG document to support the new assessment development. The process involved extending the state academic standards in ELA, mathematics, science, and social studies in grade bands 3–5, 6–8, and 10 to be accessible to students with significant cognitive disabilities. This document replaced the *Resource Guide to the South Carolina Curriculum Standards for Students in Alternate Assessment.*

The ASMGs are the foundation for the development of the assessment tasks for the SC-Alt. The ASMGs in each content area are distillations of the essences of South Carolina curriculum standards in each grade level.

Each content-area committee reviewed the large array of standards and prioritized those in grade bands 3–5, 6–8, and 10 that they deemed most important to students "now" and in the "future." They then reduced the complexity of the standard, while retaining the essence of the grade-level content knowledge and skills, to make these academic standards appropriate and accessible for students with significant cognitive disabilities. The committee was careful to address both the depth and the breadth of the academic standards and used professional judgment based on experience with the population and the content to determine the standards to be assessed. The resulting document provides the link to the grade-level standards and indicators in the state academic standards.

The measurement guidelines give task writers and teachers the specificity necessary to translate the assessment standards into assessment tasks and items and classroom instruction. A list of individuals who were involved in this process is included in each ASMG content document.

NOTE: The ELA committee recommended that the standards in the Research Goal not be included in the assessment standards. The rationale for this recommendation was that this goal is not tested to any great extent in PACT because this content is primarily taught and assessed at the classroom level. Committee members, however, indicated that the Communication Goal included standards that they deemed very important to this population and recommended including assessment standards for this strand.

The State Board of Education adopted revised ELA and mathematics academic standards in August 2007. Work is currently under way to align the ASMGs to the revised ELA and mathematics standards. State legislation is pending that calls for replacing the high school

physical science end-of-course assessment for all students with a biology end-of-course assessment; therefore, work is also under way to develop biology ASMGs. The adoption of these new standards occurred outside the cyclical review timetable and has a direct impact on the ongoing schedule for developing additional tasks for the task pool.

Stakeholder Input into the Development of the SC-Alt

To ensure the validity of the overall assessment process, a great deal of time and effort was spent obtaining input from various sources, including the State Alternate Assessment Advisory Committee, classroom teachers, parents, and other agency personnel.

South Carolina State Alternate Assessment Advisory Committee

The State Alternate Assessment Advisory Committee meets quarterly to provide oversight to the SC-Alt. The committee includes members of the original Alternate Assessment Steering Committee and the High School Stakeholder Committee. The membership also includes parents, special educators, representatives of higher education, content specialists, special education directors, and district test coordinators. Additional members include representatives from the Department of Disabilities and Special Needs, the University of South Carolina School of Medicine, the South Carolina Assistive Technology Project, the South Carolina Interagency Deaf Bind Project, the Autism Society of South Carolina, and Pro-Parents of South Carolina.

The Advisory Committee provided input on its expectations for the revised alternate assessment during the first meeting with the contractor, AIR, on November 5, 2004. SCDE and AIR staff reported each step of the development process to the Advisory Committee at each meeting and sought its advice and recommendations.

Early Development Activities

At the recommendation of the Advisory Committee, AIR item writers visited classrooms in South Carolina during January and February 2005 to observe teaching strategies and materials that were in use. They also reviewed PACT-Alt portfolios for examples of evidence that teachers used to demonstrate progress toward proficiency on grade-level standards and examined the characteristics of the HSAP-Alt performance event in order to build on the existing system.

Teacher focus groups were convened during January 2005 to obtain feedback from teachers on the types of tasks that they believed were appropriate, the protocol format that they preferred, and the materials that they recommended for inclusion in the assessment.

Qualified item writers employed by AIR were trained to write tasks and items specifically aligned with the alternate assessment standards and measurement guidelines. Item writing teams included AIR staff with expertise in the content areas; alternate assessment specialists; and consultants in the areas of instruction of students who are blind and visually impaired, students who are deaf and hard of hearing, and students with cognitive disabilities.

Prior to developing science and social studies tasks, additional training was provided to the writing teams by SCDE staff and the AIR alternate assessment specialist on February 14, 2006. The training was based on the materials *Designing from the Ground Floor* developed by the National Alternate Assessment Center (NAAC).

Consideration of universal design was a focus throughout the development process. Items including passages and response options were developed to use objects, pictures, picture symbols, words, and numbers. Several tasks in all four content areas and at different levels of complexity were piloted with South Carolina teachers and students in March and May 2005. The pilot teachers were interviewed by AIR staff to determine the item characteristics and parameters that teachers believed worked well or did not work.

Summary of the Development and Review of the SC-Alt Tasks

- The task and item development process began with the creation of task kernels. AIR was primarily responsible for the majority of task kernels, with input from SCDE and teachers in South Carolina. Task kernels are basic ideas for an assessment activity, stimulus materials, and purpose, which, based on their relation to the South Carolina ASMGs, were used to develop a task and its items.
- SCDE reviewed the task kernels and provided feedback to AIR on which kernels were acceptable, were unacceptable, or needed revision. These reviews included alignment with the ASMGs.
- AIR item writers developed the items and stimulus materials. These items were reviewed internally by the content experts for clarity, quality, and alignment with ASMGs.
- Following the comprehensive AIR internal review, the tasks and items underwent technical review by AIR to ensure that the items were properly keyed and scaffolded, the instructions were appropriate, the stimulus materials were interpretable, and the items were generally consistent in design with other tasks and items under development.
- Items that passed internal review by the AIR development staff were reviewed by the senior content lead for each content area and the senior alternate assessment specialist. This review ensured that within the content area, tasks and items followed the design of the assessment and were consistent with respect to format, presentation, and general administration procedures.
- Before items were passed to SCDE, the project director reviewed all items to ensure that the items were consistent with the foregoing factors across content areas and grade bands.
- Following the final internal AIR review, items were passed to SCDE for its review. During this process, SCDE staff, including content specialists, special educators, and assessment specialists, provided feedback to AIR on the design of the tasks and items, the alignment of items to the ASMGs, and the appropriateness of items for use in South Carolina. Some items were revised by SCDE to improve alignment with the ASMGs.

- Approved items were placed into tasks for a small-scale tryout, conducted by AIR with the assistance of teachers in South Carolina and Northern Virginia and AIR staff. These tryouts provided invaluable information regarding the clarity of instructions, the utility of the stimulus materials, and the success of the items and tasks in producing expected responses. Items that showed obvious problems were revised or discarded.
- After changes were made to the prototypes as a result of the pilots and tryouts, a committee of South Carolina teachers was convened on July 12, 2005, to review the revised tasks and provide further input and recommendations.

Content, Bias, and Sensitivity Reviews

Once small-scale tryouts were concluded, AIR, SCDE, and educators in South Carolina reviewed the tasks and items for alignment with the ASMGs and for bias and sensitivity concerns. Committees comprising teachers of students with significant cognitive disabilities, representatives of higher education, special education administrators, experts in the instruction of students with limited English proficiency, and content experts from across the state participated in these reviews to consider

- alignment to the ASMGs,
- bias for specific groups and types of disabilities,
- accessibility of the tasks to the entire population for whom the test was designed,
- specific characteristics of items that tend to exhibit bias or are not appropriate for or sensitive to the characteristics of student subgroups (e.g., exclusionary language, stereotypes),
- format and content of the tasks,
- accessibility of materials, and
- clarity of instructions and ease of administration.

During these reviews, some items were recommended for revision or elimination by the committee members. The ELA and mathematics Content and Bias Sensitivity Review Committee met November 7─9, 2005, and the science and social studies committees met May 31─June 2, 2006.

Development of Field-Test Forms

- On the basis of the feedback from all the steps above, AIR conducted a final review and sign-off for all items and tasks. Following this review, the items and tasks were affirmed ready for field testing.
- Prior to assembling tasks into field-test forms, the senior content lead for each content area and the project director reviewed the items and tasks one last time to determine whether the revisions were appropriate and maintained the alignment of the item to the targeted assessment standard and measurement guideline.
- Tasks and their items were then placed into field-test forms consistent with the specifications described earlier.

Item Data Review

- After field testing, AIR and SCDE staff, including alternate assessment specialists, psychometricians, content specialists, and special educators, met to review the field-test statistics.
- They reviewed the statistics associated with each item and task to determine whether the items were functioning within expectations and whether the tasks were appropriately placed within the instrument. The statistical criteria applied to the field test item data and to the operational item data are described in Chapter 5.
- The committee also considered teacher comments on specific items from the field test, data from field-test observations, and the results of the alignment studies to make decisions about the inclusion of items in the operational assessment.
- Items that did not meet these criteria were retained for possible future operational use (or were revised for recalibration).
- The Item Data Reviews for ELA and mathematics were held on August 23, 2006. The review for science was conducted on December 11, 2006, and the social studies review was completed in June 2007.

Development of Operational Task/Item Pool.

- AIR once again reviewed all data associated with the tasks and items to determine whether the items were functioning as expected and were useful for measuring the achievement of students in South Carolina
- Items that survived all review and analysis criteria were placed into the operational task/item pool.

Design and Development of the SC-Alt Field Tests

Following the task development process, the field-test forms were designed and produced. The primary purposes of the field-test administrations for English language arts and mathematics (in spring 2006), science (in fall 2006), and social studies (in spring 2007) were to produce data to evaluate SC-Alt tasks and items and to guide the assembly of operational test forms to be used in 2007 and beyond. Student scores based on field-test data were not reported.

This section describes the design for data collection, linking, and scaling in 2006 and 2007 field-test administrations; forms assembly for the operational tests; and the design for operational forms for 2007 and beyond.

English Language Arts and Mathematics Field-Test Designs

In spring 2006, field tests were conducted in ELA and mathematics during the field-test administration window, March 20–April 28. Details regarding student participation, analysis, and conclusions drawn from this field test are in a separate report, *South Carolina Alternate*

Assessment (SC-Alt): Technical Report on English Language Arts and Mathematics Field Test Administration, Spring 2006.

Prior to field-testing, three pilot tests were conducted to determine whether any tasks needed to be revised on the basis of feedback from test administrators. Additionally, the pilot tests examined the feasibility of pre-identifying a student for placement into tasks with high, medium, and low complexity related to the student's level of cognitive functioning.

The SC-Alt field-test administration in spring 2006 included two sets of test materials—one for English language arts (ELA) and one for mathematics. For ELA, three content strands were assessed:

- Reading
- Writing
- Communication

The mathematics tasks were chosen from five standards:

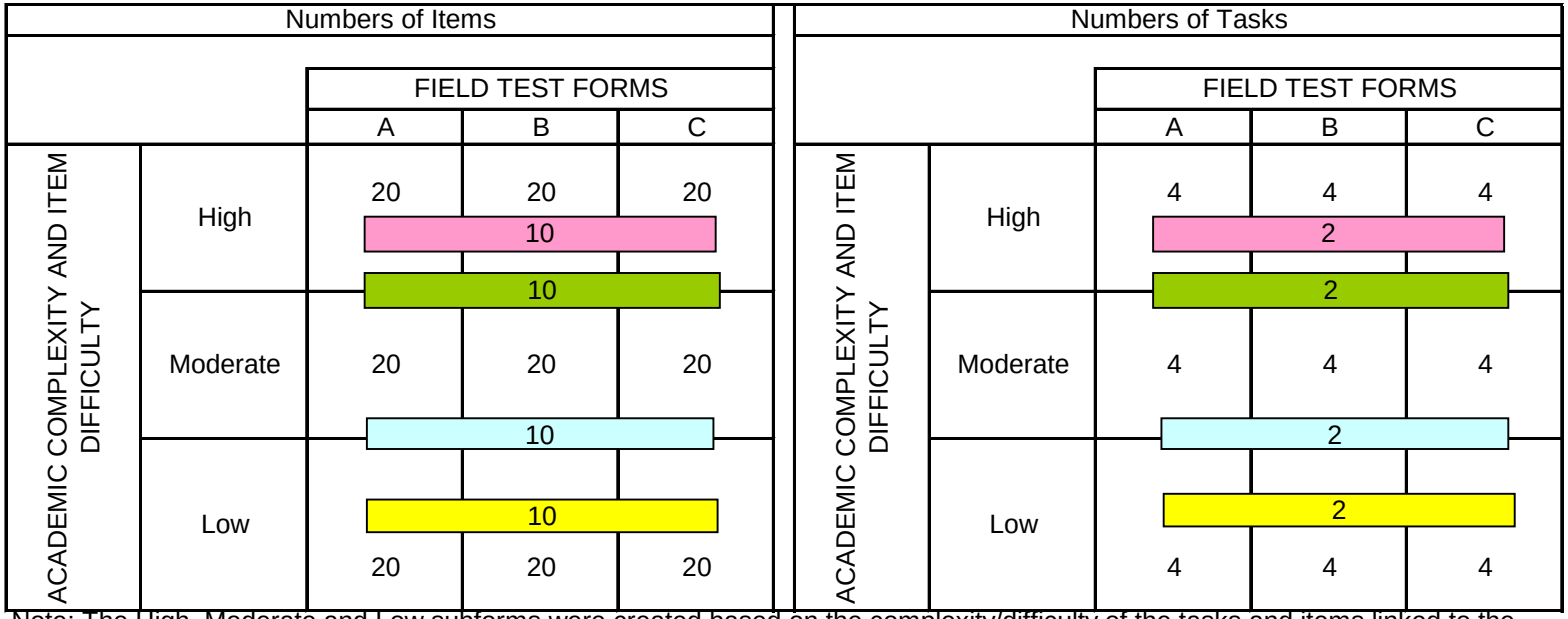
- Number and Operations
- Algebra
- Geometry
- Measurement
- Data Analysis and Probability

The field-test forms were not grade-band specific, and each form contained a range of tasks that included items with a range of difficulty.

The field test used three forms per content area (forms A, B, and C), each divided into subforms based on academic complexity of content and item difficulty (high, moderate, and low). Students were pre-assigned to complexity levels based on teachers' judgments of academic proficiency on a Student Placement Questionnaire (SPQ). The SPQs described levels of academic proficiency using "can-do" statements related to the academic content standards for ELA and mathematics. AIR created field-test forms so that items could be accurately calibrated using linking items that spanned field-test forms and complexity levels.

In all, approximately 40 linking items spanned the field-test forms in the design. Exhibit 1 depicts the number of items in each form and the items used to link performance across both forms and performance levels. Approximately 10 items spanned forms at each complexity level (cross-form linking items). Approximately 10 items spanned forms and complexity levels across the high and moderate forms and the moderate and low forms (cross-level linking items). Each form had approximately 40 total items: 20 unique items, 10 cross-form linking items, and 10 cross-level linking items.

Exhibit 1: Spring 2006 Field-Test Design for English Language Arts and Mathematics



Note: The High, Moderate and Low subforms were created based on the complexity/difficulty of the tasks and items linked to the academic content through the ASMGs.

Science and Social Studies Field-Test Designs

The fall 2006 science and spring 2007 social studies field test forms were grade-band specific.

The science field test included 14 tasks within each grade band to ensure an adequate yield for 12 tasks on the operational form. The science assessment addressed four content strands:

- Scientific Inquiry
- Life Science
- Earth Science
- Physical Science

Forms were administered in three grade bands (3–5, 6–8, 10) with three starting points within each grade band, corresponding to the three levels of complexity.

Each form consisted of all 14 tasks for that grade band. Students were assigned to one of three different starting points within the form and were expected to respond to 5 to 7 tasks (depending on their assigned starting point). Like the previous field test, overlapping tasks between complexity levels were used to facilitate within-grade band scaling. Across grade bands, linking was accomplished by including tasks from the 3–5 grade-band form and the grade 10 form on the 6–8 grade band form. The within-grade-band linking tasks were used as linking tasks across grade bands at the appropriate complexity level. This design is depicted in Exhibit 2.

Exhibit 2: Fall 2006 Field-Test Linking Design for Science

Science Field-Test Linking Design									
Form Task No.	**Grade 3–5 Low (n = 260)**	**Grade 3–5 Moderate (n = 260)**	**Grade 3–5 High (n = 260)**	**Grade 6–8 Low (n = 260)**	**Grade 6–8 Moderate (n = 260)**	**Grade 6–8 High (n = 260)**	**Grade 10 Low (n = 210)**	**Grade 10 Moderate (n = 210)**	**Grade 10 High (n = 210)**
1	Task 1			Task 1			Task 15		
2	Task 2			Task 16			Task 16		
3	Task 3			Task 5			Task 17		
4	Task 4			Task 6			Task 18		
5	Task 5	Task 5		Task 19	Task 19		Task 19	Task 19	
6	Task 6	Task 6		Task 20	Task 20		Task 20	Task 20	
7		Task 7			Task 8			Task 21	
8		Task 8			Task 21			Task 22	
9		Task 9	Task 9		Task 9	Task 9		Task 23	Task 23
10		Task 10	Task 10		Task 10	Task 10		Task 24	Task 24
11			Task 11			Task 23			Task 25
12			Task 12			Task 24			Task 26
13			Task 13			Task 13			Task 27
14			Task 14			Task 28			Task 28

The social studies field test in spring 2007 required more tasks and a slightly different linking design based on the social studies standards. Only grades 3–8 are tested in social studies in the general assessment and in the SC-Alt.

The assessment tasks for social studies were based on the social studies literacy elements and on grade-level academic content standards. The literacy elements are cumulative and are embedded in instruction and assessment across grades.

The ASMG development committee recommended organizing the literacy elements into five themes to include: I. Self and Surroundings; II. Family and Community; III. Authority, Rules, and Consequences; IV. Citizenship; and V. Values and Principles. Ten tasks were developed for the standards in these themes and were used as linking tasks between the grades 3–5 and grades 6–8 forms.

Grade-level-specific tasks were developed to address grade-level academic content within two additional themes: VI. Economics, and VII. Historical Events and Accomplishments of Key Figures. Each grade level addresses specific content. For example, the academic content for grade 3 is South Carolina Studies and the content standards for grade 6 relate to Ancient Cultures to 1600. A total of nine tasks were developed for the standards in themes VI. and VII. for each of the 3–5 and 6–8 grade-band forms.

The field-test forms included a total of 19 tasks in each form. In this design, the linking for the 3–5 and 6–8 forms was achieved through the 10 tasks allocated to the literacy elements of themes I.–V. Of the 19 tasks in each field-test form, 5 targeted low complexity, 7 targeted moderate complexity, and 7 targeted high complexity. Students were assigned to one of three different starting points within the form and were expected to respond to 5 to 7 tasks (depending on their assigned starting task).

The social studies field test was administered concurrently with the operational tests in ELA, mathematics, and science in spring 2007. The same SPQ procedures were used to place students in starting positions for the social studies assessment as were used for the operational assessments. The social studies design is presented in Exhibit 3.

Exhibit 3: Spring 2007 Field-Test Linking Design for Social Studies

Content Themes	Numbers of Tasks Allocated to Each Theme		
	Linking	**Unique**	**Unique**
	3–8	**3–5**	**6–8**
I. Self and Surroundings	2	—	—
II. Family and Community	2		
III. Authority, Rules, and Consequences	2		
IV. Citizenship	2		
V. Values and Principles	2		
VI. Economics	—	3	3
VII. Historical Events and Accomplishments of Key Figures	—	6	6
Totals	10	9	9
Note. Total of 19 tasks per grade-band assessment; total of 28 tasks			

Use of the Student Placement Questionnaires

The Student Placement Questionnaires (SPQs) are brief, structured rating instruments that represent the range of communication levels and cognitive-academic functioning found in the population of alternate assessment examinees. AIR developed the SPQs for the South Carolina Alternate Assessment program.

The student placement process is intended to achieve several important goals:

- It matches student achievement levels with the difficulty of the tasks and items that are administered.
- It allows a maximum number of student item responses at an appropriate level of difficulty.
- It minimizes fatigue by targeting the assessment to the student.
- It supports the psychometric rigor of student scores. A student is administered a better targeted test than one that contains many items the student might find too difficult. Better test targeting contributes to better score reliability. In as much as fatigue effects from the student's limited attention span are reduced, validity of the overall assessment is enhanced.

Teachers completed the SPQs in each content area to identify the most appropriate starting task for each student. For each subject, the SPQs prompted the teacher with 12 or 14 "can do" questions (e.g., can this student recognize the sun, moon, Earth?). The questions were grouped by major content standards and sampled across low-, moderate-, and high-complexity levels. Each question rated the student's functioning on a 4-point scale, valued 0 to 3. Answering the 12 or 14 questions of each SPQ, summing the total score, and identifying the most appropriate starting task in a look-up table took test administrators approximately 6 or 7 minutes.

The look-up table identified ranges of SPQ scores that corresponded to one of three starting tasks. Teachers used the SPQs to assign students to starting points on the assessment. Cut points for the science SPQ were based on the rules derived for the mathematics SPQ but were altered for the number of items on the science SPQ. Details regarding the student participation, analysis, and conclusions drawn from this field test appear below.

Administration: Placement and Stopping Rules

After teachers identified the most appropriate starting task for a student, they followed several rules as they administered the starting task and subsequent tasks. In the fall 2006 science field test, they administered (a) all items in the first four tasks and (b) as many items as possible of the three subsequent tasks—at a minimum, the first two items of each of these tasks.

In the spring 2007 social studies field test, teachers followed the directions shown in Exhibit 4.

Exhibit 4: Directions for Administering the 2007 Social Studies Field Test

Students Who Start at Task 1:

Administer all items in tasks 1 through 7

- If the student responds successfully (see next page for definition of "responds successfully") on task 7, administer all items in task 8
  - If the student does not respond successfully on task 7, conclude the administration
- If the student responds successfully on task 8, administer all items in task 9
  - If the student does not respond successfully on task 8, conclude the administration
- If the student responds successfully on task 9, administer all items in task 10
- Continue until the student can no longer respond successfully

Students Who Start at Task 5:

Administer all items in tasks 5 through 12

- If the student responds successfully on task 12, administer all items in task 13
  - If the student does not respond successfully on task 12, conclude the administration
- If the student responds successfully on task 13, administer all items in task 14
  - If the student does not respond successfully on task 13, conclude the administration

- If the student responds successfully on task 14, administer all items in task 15
  - If the student does not respond successfully on task 15, conclude the administration
- Continue until the student can no longer respond successfully

Students Who Start at Task 11:
Administer all items in tasks 11 through 19

Definition of Responding Successfully: "Responding Successfully" means getting at least three total points on a task.

Special Circumstances—Modification of the Starting Task

When students were started on tasks above Task 1 (Task 5 or 11 for the social studies example), teachers were instructed to determine if the student was able to respond successfully on that task according to the "responding successfully" definition. If the student did not respond successfully on the first task administered, the teacher was instructed to drop back to the next lower starting task and continue testing. Alternately, if a student starting on a lower task (Task 1 or Task 5) responded successfully on the last required task for that start point, the teacher was instructed to continue to administer tasks until the student could no longer respond successfully. The starting and stopping rules used with the SPQs for the 2007 administration are presented in appendix B.

SPQ Summary

The preceding discussion reviewed some of the implementation procedures for the SPQ. Here we will briefly review two of the technical characteristics of the SPQ: the method used to select the SPQ recommended starting task and the usefulness of the SPQ as an indicator of student starting task.

Procedure for Determining the Recommended Starting Tasks. The "cut scores" on the SPQ that suggest starting task assignment were developed using a comprehensive statistical procedure that is fully described in the *South Carolina Alternate Assessment (SC-Alt): Technical Report on English Language Arts and Mathematics Field Test Administration, Spring 2006.*

Briefly, the basic steps of the procedure that gave rise to the threshold cut points on the SPQ were:

1. Calibrate the SPQ items to the SC-Alt scale in a joint calibration, using the average locations for the test items as anchor values (separately for each content area).
2. Select items from the SPQ scale to be representative of the content of the assessment and the range of the theta scale.
3. Assess the reliability and score distributions of the revised SPQ scales using data from the field test.
4. Construct a raw-score to theta transformation scale for the revised SPQ scale.
5. Determine minimum cut scores on the theta scale that differentiate the Rasch difficulties of the items in each complexity range of the SC-Alt.
6. Determine the raw scores on the SPQ associated with the theta cut scores from Step 5 using the raw score to theta transformation scale.
7. Adjust the raw cut scores from Step 6 to ensure students are not exposed to items that are too far beyond their level of proficiency and that an adequate number of students are assigned to each starting point.

Thus, the cut points were determined as the result of this comprehensive logistic regression approach and subsequently implemented as described in the spring 2006 technical report.

Usefulness of the SPQ for Determining the Starting Task. AIR gathered information from the 2007 administration regarding the agreement between SPQ recommended start points and the final observed start points as determined by a review of the 2007 item data. The results of this study are reported in detail in Chapter 8.

The instructions for using the SPQ include procedures requiring teachers to adjust the starting point below the SPQ recommended start point when the student is not successful on the first administered task. Alternately, after reviewing the assessment, some teachers may have judged that a student needed to start at a higher level than recommended by the SPQ. This result occurred almost exclusively when the SPQ recommended starting point was Task 1.

In general the results of the 2007 study show that the SPQ worked well in targeting starting tasks, resulting in an agreement between the SPQ recommended start point and the observed start point for 91% of the test administrations.

Teacher Scoring Accuracy

The design of the SC-Alt includes test administrator (teacher) scoring of student responses. The accuracy with which the test administrator evaluates student performance is central to the student receiving the correct scores and the correct performance level.

A special video study was conducted during the 2007 administration to confirm that test administrators were following all scoring procedures accurately. For this study, scoring accuracy refers to the degree to which teachers follow scaffolding and scoring directions correctly and assign correct scores to student responses.

Scoring accuracy by the test administrators was evaluated by having trained raters at AIR review the video tapes of the test administrations and assume the role of the test administrator in scoring student responses. The AIR raters did not know the scores assigned by the test administrators at the time of their own assignment of scores. After the raters concluded their scoring of the student responses, the consistency between the test administrators and AIR raters was determined.

The scoring consistency analyses are presented in Appendix C - Exhibit 53. The results indicate that there was a high degree of consistency between the test administrators and the AIR raters, suggesting the conclusion that test administrators in South Carolina understood the scoring procedures and implemented them accurately when scoring student responses.

2007 Operational Test Booklets and Administration and Scoring Procedures

For each grade-band test form in each content area, tasks and items were selected that met the statistical criteria and that covered the breadth of the targeted ASMGs. In the assembly of the 2007 operational test forms, tasks were ordered by increasing difficulty as indicated by the empirical difficulty of the first item in each task, which was determined by Item Response Theory (IRT) analysis. The goal was to produce technically sound assessment instruments to support valid inferences about what students know and can do relative to the ASMGs in each content area.

The SC-Alt operational administration in spring 2007 included three sets of test materials in English language arts, mathematics, and science: one for the 3–5 grade-band assessment, one for the 6–8 grade-band assessment, and one for the grade 10 assessment. (Social studies used sets of materials for the grade band 3-5 and 6-8 assessments. Grade 10 is not part of the social studies assessment.) Teachers (test administrators) received a *Test Administration Manual* (*TAM*) and comprehensive training based on the manual and the test materials.

The 2007 operational test booklets contained 12 tasks in each content area. Tasks were arranged in test forms in the order of the empirical difficulty of the first item in each task. Each test form (elementary, middle, and high school) included linking tasks to support psychometric linking of the grade-band score scales. Each task consisted of four to eight separate items. Teachers were instructed to administer at least 5 or 7 tasks to each student, depending on the SPQ designated starting point.

Teachers also received other materials with each test booklet:

- A manipulatives kit (with printed and physical manipulatives for all tasks)
- An Answer Folder for each participating student
- A Student Placement Questionnaire and directions for determining the starting task for each student

Exhibit 5 summarizes the operational grade-band assessments and the numbers of tasks in each grade assessment for 2007.

Exhibit 5: Numbers of Tasks in Each Grade-Band Assessment - 2007 Operational Test

Grade Band	Total in Each Grade Band
10	12
6–8	12
3–5	12

The approximate test length for each grade band assessment for the 2007 administration was 60 items (12 tasks × an average 5 items per task) and 120 score points (60 items × an average 2 points per item).

Linking Tasks in Each Grade-Band Assessment

All tasks in each SC-Alt grade-band assessment align with the ASMGs in that grade band. For example, the first two items in task 9, which is part of the grade band 3–5 ELA assessment (see Exhibit 6), align with Measurement Guideline 27, "Identify the problem and/or the solution in a story or drama," and Measurement Guideline 16, "Identify the impact of a given cause or effect on a given character." Respectively, these Measurement Guidelines are linked to State Academic Standards and Indicators 3-R2.2and 5-R1.11 from grade band 3–5.

Because adjacent grade-band score scales are linked psychometrically, some tasks in each grade-band assessment align with ASMGs in both adjacent grade bands. For example, ELA task 10, which provides data for psychometric linking of the grade bands 3–5 and 6–8 score scales, aligns with ASMGs at both grade bands. Similarly, item 1 in task 10 aligns with ASMG 30, "Identify the purpose of a text"; that ASMG is linked to State Academic Indicator 3-R2.10 at grade band 3–5 and State Academic Indicator 6-R2.9 at grade band 6–8 (see Exhibit 6).

All items in linking tasks are designed to be appropriate for students in *both* adjacent grade bands. The alignment studies (discussed in Chapter 8) confirm that all tasks in each grade-band, including linking tasks, align with ASMGs for each separate grade band and with the corresponding grade-band academic content standards. In addition, the corresponding grade-level State Academic Standards and Indicators to which the ASMGs are linked *do* differ across the adjacent grade bands. (see Appendix A)

Exhibit 6: Two Tasks from the Grade Band 3–5 ELA Assessment That Illustrate the Alignment of Items of Grade-Band ASMGs and State Academic Standards

Item	SC-Alt ASMG		Corresponding State Academic Standards and Indicators from Grades 3–5		Corresponding State Academic Standards and Indicators from Grades 6–8
Task 9					
Item 1	Recognize conflict in stories: ▪ 27. Identify the problem and/or the solution in a story or drama.		3-R2.2: Demonstrate the ability to identify problem and solution in a work of fiction or drama.		--
Item 2	Determine cause and effect in texts read aloud or independently: ▪ 16. Identify the impact of a given cause or effect on a given character.	☐	5-R1.11: Demonstrate the ability to analyze cause and effect.		
Item 3	Analyze plots, characters, and settings in literature: ▪ 25. Identify and describe characters, settings, and events in a story.		3-R2.1: Demonstrate the ability to analyze characters, setting, and plot in a literary work.		
Item 4					
Item 5	Make predictions about text: ▪ 9. Use pictures and words to make predictions about texts read aloud or independently.		3-R1.7): Demonstrate the ability to make predictions about stories.		
Task 10					
Item 1	Identify the author's purpose: ▪ 30. Identify the purpose of a text.		3-R2.10: Continue identifying the author's purpose in a variety of texts.		6-R2.9: Demonstrate the ability to identify the author's purpose in texts in a variety of genres.
Item 2	Recall details: ▪ 7. Recall details in tests read aloud or independently.		3-R1.5: Demonstrate the ability to recall details in texts.		6-R1.5: Demonstrate the ability to identify the details that support the thesis of a particular
Item 3					

Item 4 Item 5	Follow written directions: ▪ 17. Follow written one-step or multistep directions (presented in words/pictures/symbols/ objects).		3-R1.13: Demonstrate the ability to follow a logical sequence of written directions to complete a task.		text. 6-R1.11: Demonstrate the ability to follow multistep directions such as those for preparing applications and completing forms.
Item 6	Make predictions about text: ▪ 9. Use pictures and words to make predictions about texts read aloud or independently.		3-R1.7: Demonstrate the ability to make predictions about stories.		6-R1.6: Demonstrate the ability to make predictions about stories.

Chapter 3: Spring 2007 Operational Test Administration

This section describes the spring 2007 operational test administration:

- Student participation for the spring 2007 administration
- Demographics of participating students
- Test administration window, materials, and timelines
- Test administrator requirements
- Test administrator training
- Pre-assessment using the Student Placement Questionnaire
- Fidelity of administration and accuracy of scoring
- Test security provisions

Student Participation for the Spring 2007 Administration

Students participating in the spring 2007 operational administration were students whose IEP team had determined that they met the following SC-Alt participation criteria for alternate assessment and who were ages 8–13 or 15 on September 1, 2006. These are the ages of typical students who are in grades 3–8 and 10.

- The student demonstrates a significant cognitive disability and adaptive skills, which result in performance that is substantially below grade-level achievement expectations even with the use of accommodations and modifications;
- The student accesses the state-approved curriculum standards at less-complex levels and with extensively modified instruction;
- The student has current adaptive skills requiring extensive direct instruction and practice in multiple settings to accomplish the application and transfer of skills necessary for application in school, work, home, and community environments;
- The student is unable to apply or use academic skills across natural settings when instructed solely or primarily through classroom instruction; and
- The student's inability to achieve the state grade-level achievement expectations is not the result of excessive or extended absences or social, cultural, or economic differences.

Exhibit 7 indicates the age ranges of students who participated in the SC-Alt in spring 2007. Exhibit 8 indicates the alternate assessment eligibility categories that were placed in each eligible student's state precoding file. (Precoding files enabled SCDE and AIR to ensure that the appropriate SC-Alt assessment materials were delivered to teachers in time for the spring 2007 administration.)

Exhibit 7: Age Reference Sheet for 2006–07 Alternate Assessment, Spring 2007 Operational Administration

Age as of 9/1/06	Corresponding Birth Date Range		Test Required 2006–07	Precode AA Eligibility Code
	Beginning DOB	Ending DOB		
3	09/02/02	09/01/03	none	
4	09/02/01	09/01/02	none	
5	09/02/00	09/01/01	SC RA-Alt	3
6	09/02/99	09/01/00	SC RA-Alt	3
7	09/02/98	09/01/99	none	4
8	09/02/97	09/01/98	SC-Alt Elementary	1
9	09/02/96	09/01/97	SC-Alt Elementary	1
10	09/02/95	09/01/96	SC-Alt Elementary	1
11	09/02/94	09/01/95	SC-Alt Middle	1
12	09/02/93	09/01/94	SC-Alt Middle	1
13	09/02/92	09/01/93	SC-Alt Middle	1
14	09/02/91	09/01/92	none	4
15	09/02/90	09/01/91	SC-Alt HS	2
16	09/02/89	09/01/90	none	4
17	09/02/88	09/01/89	none	4
18	09/02/87	09/01/88	none	4
19	09/02/86	09/01/87	none	4
20	09/02/85	09/01/86	none	4
21	09/02/84	09/01/85	none	4

Exhibit 8: Precode Project Coding (Alternate Assessment Eligibility Field)

Code	SC-Alt Administration	Full Description
0	Criteria not met	The student does not meet criteria for alternate assessment.
1	SC-Alt Elementary / Middle	The student requires alternate assessment and meets the age eligibility requirement for assessment with **SC-Alt Elementary / Middle** this current school year (8–13 years old on September 1, 2006).
2	SC-Alt HS	The student requires alternate assessment and meets the age eligibility requirement for assessment with **SC-Alt HS** this current school year (15 years old on September

		1, 2006).
3	SCRA-Alt*	The student requires alternate assessment and meets the age eligibility requirement for **SCRA-Alt** this current school year (5 years old for kindergarten or 6 years old for first grade on September 1, 2006).
4	Alternate Assessment / Not Age Eligible	The student requires alternate assessment **but does not meet the age eligibility requirements to be assessed with SCRA-Alt or SC-Alt this current school year** (i.e., the student was age 7, 14, 16, or older than 16 on September 1, 2006).

*SCRA-Alt: South Carolina Readiness Assessment – Alternate; an assessment of student readiness administered to students in kindergarten and first grade. The SCRA-Alt is a teacher rating scale and is not included in the state accountability system.

Demographics of Participating Students

This section describes the demographics of participating students by test form (elementary, middle, or high school). Exhibit 9 presents the student demographics for participating students in each grade band.

For the purpose of this report, the inclusion of students was based on the same criteria applied in the reporting of student scores. A student was included if the following criteria were met: (1) a signed security affidavit was received for the student, (2) the student was not noted to be excluded from reporting for some other reason (e.g., inappropriate administration procedures), and (3) the number of coded responses met the attemptedness requirement for student scoring (i.e., five valid responses) in at least one content area. The population of students reported, therefore, includes 1,085 elementary school test forms, 1,009 middle school test forms, and 351 high school test forms.

According to the attemptedness requirements, a student's responses to a test form could be assigned to one of three completion status categories: completion ("student satisfied attemptedness rule"), invalid ("student did not satisfy attemptedness rule"), or not tested ("student did not answer any content area items"). For all content areas, the majority of students reported completed the administered test form; 98% or more of all students completed each content area. Of the remaining student records, none of the test forms was categorized as invalid; typically, 1% or less of reported test forms were categorized as not tested, with higher rates of not tested reported for high school ELA (2.0%) and social studies (elementary school: 1.5%, middle school: 1.7%).

Given that the number of students assessed by the high school test form was approximately one-third the number of students assessed by either the elementary or the middle school forms, the proportion of demographic characteristics of the student population were relatively consistent across grade bands. In terms of ethnicity, African American students made up at least 50% of the assessed students across grade bands (54.2%, 51.6%, and 50.1%, respectively), Hispanic students accounted for approximately 3% (3.3%, 2.3%, and 3.7%), and White students accounted for 39.6%, 43.9%, and 45.0% of the students across grade bands.

Other ethnicities each accounted for less than 2% of the assessed population. Gender was also consistent across grade bands, with approximately a two-to-one ratio of male students (66.8%, 65.7%, and 64.4%) to females (33.2%, 34.3%, and 35.6%).

Classifying students in terms of English language proficiency was also consistent across grade bands. The majority of students (97.2%, 97.4%, and 98.6%) were classified as "English Speaker II," meaning that they had never been coded as an ESL student. The remaining language proficiency classifications each accounted for less than 1% of students by grade band with the exception of "Pre-Functional" (1.3%, 1.4%, 0.9%), indicating that the student scored "pre-functional" on the English language proficiency assessment and is receiving English as a second language (ESL) services.

The grade reported for a student in the school's database is the grade reported for funding purposes (EFA grade) and is often determined by the location of the student's educational program instead of by the student's age or years in school. Therefore, approximately 7.3% of students administered the elementary form (for students ages 8–10, typical ages of students in grades 3–5), had reported EFA grades lower than grade 3 or higher than grade 5, with most of these students classified in the contiguous grades of 2 and 6. Of students administered the middle school form (for students ages 11–13, the typical ages for grades 6–8), 25.9% of the students were reported at grades below grade 6 or above grade 8. The vast majority of these students were classified as grade 5 students (205; 20.3% of all middle school form students), which indicates that these students were being served in educational programs housed in elementary schools.

Of the students administered the high school form (for students age 15), 74.1% were reported as grade 9 or grade 10 (35.9% and 38.2%, respectively). Seventeen percent (17.1%) of the high school form students were reported as grade 8 students, indicating that these students were being served in educational programs housed in middle schools. The purpose of assigning SC-Alt grade-span forms by age is to ensure that students are instructed and assessed on the appropriate grade-span curricula regardless of where their educational programs are housed.

Thirteen different primary disabilities were reported for students assessed with the SC-Alt. The four largest disability groups assessed were students classified as having moderate mental disability, mild mental disability, autism, or severe mental disability. These four cognitive disability groups constituted approximately 90% of all students assessed (87.8%, 90.5%, and 92.9%, for the elementary, middle, and high school forms, respectively). Across all three forms, the largest disability group was moderate mental disability (34.6%, 43.9%, and 46.2%, respectively). The next largest group was mild mental disability (22.9%, 20.5%, and 24.2%), followed by autism (18.5%, 15.6%, and 12.8%), and severe mental disability (11.9%, 10.5%, and 9.7%). Students classified as orthopedically impaired or students classified as other health impaired made up 2.3% to 4.3% of the students assessed. The remaining seven categories of disabilities were represented by approximately 1% or fewer students.

Exhibit 9: Summary of Demographic Information

	Elementary		Middle		High	
	N	**%**	**N**	**%**	**N**	**%**
STUDENT'S ETHNICITY						
African American	588	54.2	521	51.6	176	50.1
American Indian	4	0.4	2	0.2	.	0.0
Asian	13	1.2	6	0.6	2	0.6
Hawaiian/Pacific Islander	1	0.1	.	0.0	.	0.0
Hispanic	36	3.3	23	2.3	13	3.7
White	430	39.6	443	43.9	158	45.0
White/African American	10	0.9	7	0.7	.	0.0
White/American Indian	.	0.0	1	0.1	.	0.0
White/Asian	1	0.1	.	0.0	1	0.3
Other	2	0.2	6	0.6	1	0.3
STUDENT'S GENDER						
Female	360	33.2	346	34.3	125	35.6
Male	725	66.8	663	65.7	226	64.4
ESL (LANGUAGE)						
Pre-functional	14	1.3	15	1.5	3	0.9
Beginner	3	0.3	2	0.2	.	0.0
Intermediate	2	0.2	1	0.1	.	0.0
Advanced	2	0.2	.	0.0	.	0.0
Full English proficient	1	0.1	1	0.1	1	0.3
Title III exited	1	0.1	.	0.0	.	0.0
English speaker II	1,055	97.2	983	97.4	346	98.6
Pre-functional - Waiver	7	0.7	7	0.7	.	0.0
Beginner - Waiver	.	0.0	.	0.0	1	0.3
ELIGIBLE FOR FREE OR REDUCED-PRICE LUNCH						
Free	670	61.8	629	62.3	203	57.8
No	335	30.9	290	28.7	115	32.8
Reduced	80	7.4	90	8.9	33	9.4
EFA GRADE (REPORTED GRADE FOR FUNDING)						
1	8	0.7	.	0.0	.	0.0
2	45	4.2	.	0.0	.	0.0
3	407	37.5	9	0.9	.	0.0
4	362	33.4	15	1.5	1	0.3
5	236	21.8	205	20.3	7	2.0
6	22	2.0	287	28.4	8	2.3
7	.	0.0	266	26.4	6	1.7
8	2	0.2	195	19.3	60	17.1

9	.	0.0	21	2.1	126	35.9
10	2	0.2	10	1.0	134	38.2
11	1	0.1	1	0.1	8	2.3
12	.	0.0	.	0.0	1	0.3
TOTAL	1,085		1,009		351	

	Elementary		Middle		High	
	N	**%**	**N**	**%**	**N**	**%**
COMPLETION STATUS: Student satisfied attemptedness rule						
ELA	1,082	99.7	1,002	99.3	344	98.0
mathematics	1,080	99.5	998	98.9	349	99.4
science	1,079	99.4	998	98.9	348	99.1
social studies	1,069	98.5	992	98.3	.	0.0*
COMPLETION STATUS: Student did not answer any content-area items						
ELA	3	0.3	7	0.7	7	2.0
mathematics	5	0.5	11	1.1	2	0.6
science	6	0.6	11	1.1	3	0.9
social studies	16	1.5	17	1.7	.	0.0
Migrant Status	.	0.0	1	0.1	.	0.0
Home Schooled	.	0.0	.	0.0	.	0.0
Medical Homebound	20	1.8	16	1.6	11	3.1
PRIMARY DISABILITY						
Moderate Mental Disability	375	34.6	443	43.9	162	46.2
Mild Mental Disability	248	22.9	207	20.5	85	24.2
Autism	201	18.5	157	15.6	45	12.8
Severe Mental Disability	129	11.9	106	10.5	34	9.7
Orthopedically Impaired	45	4.2	28	2.8	8	2.3
Other Health Impaired	40	3.7	28	2.8	8	2.3
Hearing Impaired	12	1.1	13	1.3	1	0.3
Multiple-Disability	9	0.8	7	0.7	1	0.3
Learning Disability	10	0.9	6	0.6	.	0.0
Traumatic Brain Injury	4	0.4	4	0.4	5	1.4
Speech or Language Impaired	7	0.7	4	0.4	1	0.3
Emotional Disability	4	0.4	6	0.6	1	0.3
Visually Impaired	1	0.1	.	0.0	.	0.0
TOTAL	1085		1009		351	
*Note: Social Studies was administered only as an elementary and middle school form.						

Test Administration Window, Materials, and Timelines

The following list presents important dates for the spring 2007 administration of the SC-Alt:

- SC-Alt teacher and District Test Coordinator for Alternate Assessment (DTC-Alt) test administration training: January 22–26 and 29–31, 2007 (eight single-day workshops)
- Test materials arrived in district: week of February 19, 2007

- Assessment window: March 5–April 20, 2007
- Teachers returned materials to DTC-Alt: April 23–24, 2007
- Materials shipped to contractor: April 25, 2007

Teachers had approximately seven weeks to review the materials and complete the assessment administration. Teachers received both printed and physical manipulatives to use during test administration. They were also responsible for collecting a few common classroom items that were familiar to the student to use with several tasks.

Test Administrator Requirements

Test administrators are required to receive training on all phases of the administration of the SC-Alt and must be one of the following:

- A certified employee of the district
- An employee of the district who is a critical needs teacher and has a letter of eligibility, an interim certificate, or a critical needs certificate
- A substitute teacher who is certified and employed by the district on an as-needed basis
- Someone who was a certified teacher but has allowed the teaching certificate to expire owing to retirement, change of career, or some other reason and has been approved by the district test coordinator or the DTC-Alt as a qualified test administrator
- Someone who is not certified but has been employed by the school district in an instructional capacity and has been approved by the DTC-Alt as a qualified test administrator
- Someone who is not administering the assessment to close relatives (e.g., children, grandchildren).

If a test is administered in a location other than the school, the test administrator must meet the criteria specified above.

Test Administrator Training

Test administrator training is required for all test administrators. The SC-Alt is individually administered with a standard script and scored by the test administrator as the assessment is conducted. Fidelity of administration and scoring is essential to the validity of the assessment results.

Prior to the spring 2007 operational administration, all test administrators and DTCs-Alt were required to attend one of eight regional state-level training sessions during January 2007. Packets including all training materials were provided to DTCs-Alt to use to train any teachers who were unable to attend the state training session because of illness or an emergency. At the completion of the training session, each test administrator was required to sign and submit to SCDE an acknowledgement of receiving training and readiness to conduct the assessment.

The training included the following elements:

- Review of the eligibility criteria for students participating in the alternate assessment
- Overview of the of the ASMGs, emphasizing the link to the general education standards
- Explanation of the how the assessment was developed, including the role of the review committees
- Review of test administrator requirements, test security, and test materials
- Training and practice in pre-assessment using the SPQ
- Description of the assessment format and procedures:
    - Setup
    - Script
    - Scoring
    - Adaptive instructions
- Making SC-Alt tasks accessible
- Overview of assistive technology and the alternate assessment
- Administration and scoring instruction and practice using released test items provided on video clips of South Carolina teachers actually administering a task to students representing a variety of disabilities and ethnicities
- Scoring qualifying round
- Review of procedures for receiving and shipping materials back to the DTC-Alt

Pre-Assessment Using the Student Placement Questionnaire

As noted earlier in this Technical Report, the administration of the SC-Alt uses the SPQ as a pre-assessment instrument to determine the most appropriate starting point in the assessment. Recall that the SPQ requires the teacher to evaluate the student on 12 to 15 "can do" statements addressing the student's skills and knowledge in each content area on the basis of the teacher's prior instructional knowledge of the student. A total score computed from the teacher's SPQ responses indicates the initial starting task for the assessment. Once the assessment has begun, the test administrator is required to adjust the starting point for the student if the student is not successful on the first task. Rules have been established for adjusting the starting tasks and for determining when the assessment should be concluded. The starting and stopping rules used with the SPQs for the 2007 administration are presented in appendix B.

Fidelity of Administration and Accuracy of Scoring

This section describes the steps taken to ensure the fidelity of administration and the accuracy of scoring.

During the assessment administration, a monitor must be present to observe all assessment sessions and verify the use of proper assessment procedures and the authenticity of student responses. Monitors must be trained and sign a Test Administrator Security Affidavit to verify that the appropriate procedures were used. The Test Administrator Security Affidavit contains a coded label to link the document to the student answer folder and includes the

principal's verification of the use of appropriate assessment and scoring procedures. Absence of this document generates an invalid administration.

AIR and SCDE conducted an audit of the spring 2007 administration and scoring by requiring school system staff to videotape a sample of SC-Alt administrations. A sample of students was identified for videotaping such that

- all districts implementing the SC-Alt were required to videotape at least one student administration (all content areas);
- each teacher included in the sample was required to videotape only one student; and
- the total number of videotaped administrations per district was based on the number of teachers involved in the assessment for each district.

The test administrators of the sampled students were notified of their inclusion in the sample and were given instructions for completing the videotaping. Approximately 10% of all assessed students and 33% of all test administrators were sampled to participate. The videotapes were returned to the contractor and scored by trained raters. Ten percent of these videos were also scored by AIR's senior alternate assessment specialist. More detailed information on this study is presented in appendix C.

Test Security Provisions

This section describes the test security procedures associated with the SC-Alt. SCDE has the following test security measures in place.

- Each local school board must develop and adopt a district test security policy. The policy must provide for the security of the materials during testing and the storage of all secure tests and test materials, before, during, and after testing. Before and after testing, all materials must be stored at a location(s) in the district under lock and key.
- Each District Superintendent must designate annually one individual in each district for each mandated assessment who will be the sole individual in the district authorized to procure test instruments that are used in testing programs administered by or through the State Board of Education. The designated individual for alternate assessment is the District Test Coordinator for Alternate Assessment (DTC-Alt). The DTC-Alt is responsible for receiving and distributing all SC-Alt materials and ensuring that all SC-Alt administration procedures and requirements are met.
- All school and district personnel who may have access to SC-Alt test materials or to the location in which the materials are securely stored must sign the Agreement to Maintain Test Security and Confidentiality before they are given access to the materials.
- Test administrators must be trained annually to administer the SC-Alt and must meet the all test administrator requirements.
- An assessment monitor must observe all assessment sessions and verify the use of proper assessment procedures and the authenticity of student responses for each completed assessment.

- Test administrators must complete an SC-Alt Test Administrator Security Affidavit for each student they assess and submit the form with the student's assessment materials.

Chapter 4: Setting Performance Standards

This chapter describes the methods used to set standards on the SC-Alt assessments for the 2006–07 school year and beyond. The chapter includes descriptions of achievement levels, a description of the procedure used to set standards for each content area, the goals of the process, the composition of the panels, the workshop mechanics, and the standards set for each content area, including student impact information. Complete details of this procedure can be found in a separate report (*South Carolina Alternate Assessment Spring 2007 Standard Setting Technical Report).*

From June 25 to June 27, 2007, AIR convened a diverse panel of 105 educators and non-educators to recommend status performance standards based on the spring 2007 operational test administration data for ELA, mathematics, and science, and field-test data for social studies.

Using the Item Descriptor (ID) Matching method (see Cizek & Bunch, 2007; Ferrara, Perie, & Johnson, in press), the panelists reviewed test items and the corresponding Descriptions of Achievement Levels (DALs) and then recommended performance standards for Level 2, Level 3, and Level 4 achievement levels. These standards were then translated into cut points on the student proficiency scale by AIR psychometricians. This section describes the process and outcomes of the standard-setting workshop.

Descriptions of Achievement Levels

DALs are key elements in standard-setting processes. DALs define the content area knowledge, skills, and processes that examinees at a performance level are expected to possess. The descriptions of Level 1, Level 2, Level 3, and Level 4 performance that SCDE developed make up the public statement about what and how much South Carolina educators want students to know and be able to do for each grade level and content area. In the ID Matching standard setting for the SC-Alt tests, panelists based their judgments on the DALs presented in appendix D when they placed their cut scores.

The development of the DALs followed a multistep process involving AIR staff and SCDE staff working with committees of teachers, parents, and special education administrators. The process was begun by examining the DALS used with the other South Carolina assessment programs (PACT, HSAP, PACT-Alt, and HSAP-Alt) and the performance level descriptors for alternate assessments used by other states. Following this preliminary study, a decision was made to draft four levels of descriptors, Levels 1–4, with the intent of having Level 3 represent "proficient performance" for NCLB reporting.

In the next step, staff examined item locations on the vertical scale for each grade band and looked for clustering of content strands and other response demands from the 2006 field tests in ELA, mathematics, and science. SCDE and AIR staff drafted DALS around these clusters as a starting point only. They then refined these drafts to ensure reference to all content strands and articulation within and across levels prior to submitting them for committee input.

A stakeholder committee met on March 30, 2007, and was charged with determining what proficiency "looked like" for students participating in each grade band of the SC-Alt. The committee reviewed the ASMGs, the draft labels for the DALs, and the draft DALs to develop

refined DALs to recommend to SCDE. Members were instructed to consider descriptions that allowed room for growth within grade bands and across grade bands and to recommend DALs that reflected an expectation that students will grow and achieve from year to year and demonstrate more knowledge. They were requested to design DALs to allow room for higher achievement.

After the meeting, SCDE and AIR staff reviewed these drafts to ensure consistency across grade bands and performance levels. The committee reviewed the DALs again on May 16, 2007, to refine them before the standard-setting workshop in June. Some additional refinement occurred during the standard-setting workshop. The official DALs were presented to the State Board of Education on September 12 and are posted on the SCDE website.

The ID Matching Standard-Setting Process

The ID Matching standard-setting process, described in the standard-setting plan submitted to SCDE and reviewed by the South Carolina Technical Advisory Committee, was used at a workshop in Columbia from June 25 to June 27, 2007, with a panel of 105 members. The panel was divided into four groups: an ELA group, a mathematics group, a science group, and a social studies group. Three tables in each workshop were assigned to anchor grade band 3–5. The other three tables were assigned to anchor grade band 10 (except in the social studies panel, which split the panel between grade bands 3–5 and 6–8). AIR staff provided training and led the participants through two rounds of ID Matching to first set the Level 3 standard and then the Level 2 and the Level 4 standards.

Before the participants made each of their recommendations using the ID Matching procedure, they were given a readiness form to ensure that they fully understood the task and were prepared to place the performance standard. Analysis of these evaluations showed unanimous agreement from the participants that they understood the task and were prepared to make performance standard recommendations.

Goals of the Standard Setting

The goals of the meeting, as stated to the panelists, were to

- recommend performance standards on the ELA, mathematics, science, and social studies assessments that correspond to the DALs for Level 2, Level 3, and Level 4 performance levels;
- consider the agreement and impact data to guide judgments about item difficulty and placement of the performance standards; and
- recommend to SCDE the appropriate placement of cut points on the student proficiency scales for each grade-band assessment.

Panel Composition

The 105 panelists participated in recommending performance standards across four content areas: ELA, mathematics, science, and social studies. The overall composition of the panel followed the SCDE-provided specifications and was broadly designed to ensure that the panel was widely diverse and represented a cross section of South Carolina's educators and non-

educators. The composition of all panels is shown in Exhibit 10. The demographic breakdown of the standard-setting panelists appears in Exhibit 11.

Exhibit 10: Composition of the Standard-Setting Panels

	Panelist Role					
	Grades 3–5 Subpanel			**Grade 10 Subpanel[1]**		
Panel	**Table 1**	**Table 2**	**Table 3**	**Table 1**	**Table 2**	**Table 3**
ELA	Teacher - Special Education*	Administrator - Special Education*	Administrator - Special Education*	Teacher - Special Education*	Teacher - Special Education*	Teacher - Special Education*
	Curriculum Specialist- ELA	Curriculum Specialist- ELA	Administrator - Special Education	Curriculum Specialist – ELA	Administrator - Special Education	Curriculum Specialist – ELA
	Higher Education	Teacher - Special Education	Curriculum Specialist - ESOL	Teacher - Special Education	Curriculum Specialist – ELA	Curriculum Specialist - ELA
	Teacher - Special Education	Teacher - Special Education	Teacher - Special Education	Teacher - Special Education	Teacher - Special Education	Teacher - Special Education
	Teacher - Special Education		Teacher - Special Education		Teacher - Special Education	
Mathematics	Teacher - Special Education*	Teacher - Special Education*	Teacher - Special Education*	Teacher - Special Education*	Administrator - Special Education*	Administrator - DTC*
	Teacher - Special Education	Administrator - Special Education	Curriculum Specialist - mathematics	Teacher - ESOL	Curriculum Specialist - mathematics	Curriculum Specialist - Autism
	Curriculum Specialist - mathematics	Curriculum Specialist - mathematics	Teacher - Special Education	Teacher - Special Education	Teacher - Special Education	Curriculum Specialist - mathematics
	Teacher - Special Education	Teacher - Special Education	Teacher - Special Education	Teacher - Special Education	Teacher - Special Education	Teacher - Special Education
		Teacher - Special Education	Administrator –Principal	Curriculum Specialist - mathematics	Higher Education	Teacher - Special Education
Science	Teacher - Special Education*	Administrator - Special Education*	Administrator - Special Education*	Teacher - Special Education*	Teacher - Special Education*	Teacher - Special Education*
	Curriculum Specialist - science	Curriculum Specialist - science	Administrator - Special Education	Curriculum Specialist - science	Administrator - Special Education	Administrator - ESOL
	Teacher - Special Education	Teacher - Special Education	Curriculum Specialist - science	Teacher - Special Education	Curriculum Specialist - science	Curriculum Specialist - science
	Teacher - Special Education	Teacher - Special Education	Teacher - Special Education	Teacher - Special Education	Teacher - Special Education	Teacher - Special Education
	Teacher - Special Education		Teacher - Special Education			
Social Studies	Teacher - Special Education*	Teacher - Special Education*	Teacher - Special Education*	Teacher - Special Education*	Teacher - Special Education*	Administrator - Special Education*
	Curriculum Specialist - SS	Administrator –Principal	Curriculum Specialist – Social Studies	Administrator - Special Education	Teacher - Special Education	Teacher - Special Education
	Teacher - Special Education	Curriculum Specialist – Social Studies	Parent	Teacher - Special Education	Curriculum Specialist – Social Studies	Teacher - Special Education

	Panelist Role					
	Grades 3–5 Subpanel			Grade 10 Subpanel[1]		
Panel	**Table 1**	**Table 2**	**Table 3**	**Table 1**	**Table 2**	**Table 3**
	Teacher - Special Education	Teacher - Special Education	Teacher - Special Education	Teacher - Special Education	Teacher - Special Education	

Notes (1) Grades 6-8 for Social Studies. (*) Denotes table leader.

Exhibit 11: Demographic Breakdown of Standard-Setting Panelists

		N
TOTAL		105
Gender	Female	94
	Male	11
School District	Richland 1	14
	Richland 2	10
	Horry County	5
	Lexington 2	5
	Dorchester County	4
	Florence 1	4
	Lexington 5	4
	Lexington 1	3
	Berkeley County	2
	Greenville County	4
	Charleston County	4
	Greenwood 50	2
	Kershaw County	2
	SC School for the Deaf and Blind	2
	Sumter 17	2
	Union County	2
	York 3	2
	Other School Districts (1 each)	32
Other	Department of Disabilities	1
	Pro Parents of SC	1
Race/Ethnicity	African-American	19
	Hispanic	2
	White	80
	Unknown/Other	4
Position	Special Education Teacher	61
	Curriculum Specialist	23
	Special Education Administrator	12
	Administrator	3
	Higher Education	2
	ESL Teacher/Curriculum Specialist	3
	Parent*	4

*Three parents were also special education teachers and have been counted in both categories.

Standard-Setting Workshop Activities

Workshop participants recommended performance standards for the assessments during two rounds of deliberation for each DAL in each content area and in each grade band as follows.

- Set standards in anchor grade bands (3–5 and 10)
  - Participants complete Rounds 1 and 2 for each performance level standard.
  - Table leaders *articulate* standards across grades and content areas (align them on the basis of content considerations).

- Set standards in intermediate grade band (6–8)
  - Participants complete Rounds 1 and 2 for each performance level standard.
  - Table leaders *articulate* standards across grades and content areas (align them on the basis of content considerations and consistency with anchor grade standards).

The workshop agenda shown in Exhibit 12 shows the sequence of events for the three-day meeting.

Exhibit 12: Standard Setting Workshop Agenda

Day	Approx. Times	Primary Activity	ELA	Mathematics	Science	Social Studies
1	8:00–11:00	Table leader training	24 table leaders (6 from each content area)			
	11:00–12:00 1:00–3:00	Panelist training and practice	105 panelists (23 to 29 from each content area)			
	3:00–5:00	Anchor grades, Level 3, Level 2, Level 4, round 1	14 panelists for grades 3–5; 13 panelists for grade 10	14 panelists for grades 3–5; 15 panelists for grade 10	14 panelists for grades 3–5; 12 panelists for grade 10	12 panelists for grades 3–5; 11 panelists for grades 6–8
2	8:00–9:00	Review Day 1, Finalize Round 1				
	9:00–11:00	Anchor grades, Level 3, Level 2, Level 4, round 2	14, 13	14, 15	14, 12	12, 11
	11:30–1:00	Anchor grades, moderation by table	24 table leaders			

		leaders, all content areas				
	2:00–5:00	Grades 6–8, Level 3, Level 2, and Level 4, round 1	27	29	26	n/a
	2:00–5:00	Closing, final results, and evaluation for social studies	n/a	n/a	n/a	23
3	9:00–11:00	Grades 6–8, Level 3, Level 2, and Level 4, round 2	27	29	26	n/a
	11:30–12:00; 1:00–2:00	Final moderation by table leaders, all content areas	18 remaining table leaders			
	1:00–3:00	Closing, final results, and evaluation	82 remaining panelists			

Throughout the week, the panelists had many opportunities to reflect on the pattern of performance standards they were recommending. Their general conclusion was that they were satisfied that the standards made sense from a content and experiential point of view. They felt that the patterns reflected the requirements of the content standards and the realities of student performance.

With few exceptions, panelists recommended standards that followed an orderly progression of increasing achievement across levels and grade bands. Specifically, with the exception of mathematics at the grade band 6–8 and grade 10, all recommended achievement-level standards increased in difficulty in subsequent grade bands. This fact is evident by examining the scale scores associated with each recommended cut score at each grade and achievement level. Exhibits 13 through 16 show the scale score associated with the cut score recommended by each panel. These results were achieved through the process of setting cut scores at anchor grades, making sure they resulted in consistent expectations across grade bands, and providing articulated standards as a starting point for intermediate grade bands.

Cut Score Review and the Setting of Final Cut Scores

The results of the standard-setting workshops were presented to the Technical Advisory Committee (TAC) of the Office of Assessment, SCDE, on July 27, 2007. The TAC discussed the results of the standard-setting workshops, reviewed the articulation of the cut scores by grade level, and recommended strategies to the Office of Assessment staff for improving the articulation of the final scores while respecting and maintaining the basic cut score decisions made by the workshop panelists.

The Office of Assessment staff presented the following information to the TAC for review and discussion:

- demographic and disability characteristics of the spring 2007 test participants;
- spring 2007 standard-setting results from the standard-setting workshop conducted by AIR;
- score distributions and descriptive statistics; and
- collateral data, including results from PACT, PACT-Alt, HSAP-Alt, and HSAP.

In addition, Special Education Unit staff of the Office of Assessment stated two assumptions about the students assessed with the SC-Alt and their current levels of academic instruction:

- The vast majority of students with significant cognitive disabilities will improve in their academic achievement as a result of instruction, which will result in increased achievement performance across grades (i.e., from elementary through high school).
- Many teachers of students with significant cognitive disabilities are just beginning to implement academic standards-based instruction, and therefore the students assessed with the SC-Alt in spring 2007 have not received the level of instruction that is desired or expected in the future.

A consideration of the initial cut scores in light of these assumptions identified a need to improve the articulation of cut scores across grade levels, both in terms of the scale score growth expectations on the vertical achievement scale and the percentage of students identified in each achievement level.

The TAC recommended that SCDE staff consider adjustments to improve cut score articulation to be more consistent with expectations related to the design of the test and the achievement performance of the students. The TAC recommended that careful and thoughtful adjustments to the cut scores, guided by the standard error confidence intervals around each original cut, would be reasonable and acceptable policy adjustments.

A committee of Office of Assessment staff examined the scale score articulation and the percentage of students in performance levels by grade and recommended minor adjustments to the original cuts made by the workshop panelists. The adjustments made to each cut score and the resulting final cut scores are presented in through Exhibit 16.

The standard error of the panelist-recommended cut score in Exhibit 13 through Exhibit 16 was based on estimates of the standard error of the median suggested by Huynh (2003). However, two additional details about the standard errors of the median are important to note. The first is that the standard errors were based on the actual recommended cut scores, and any post hoc adjustment to the cut scores was treated as a constant adjustment. In other words, the adjusted cut score still had the same standard error. The second detail is that the standard errors were initially calculated as standard errors of the page numbers in the ordered-item booklet. In other words, a standard error of the median equal to 2 meant that the error in the panelists' recommended cut score was about plus/minus two pages. The standard error was then transformed to the scaled score metric through linear interpolation. This was possible because each page number in the ordered-item booklet has a scale score associated with it.

Exhibit 13: Panel Recommended and Adjusted Final Cut Scores—ELA

Performance Level	Panel Recommended Cut Scores		Adjustment to Final Cut Scores		
	Scale Score	Scale Score Standard Error of Measurement (± SEM)	Level of Adjustment (± SEM)	Final Cut Scale Score	Standard Error of Cut Scale Score
Grades 3–5					
Level 2	403	13.75	None	403	2.96
Level 3	466	9.54	None	466	1.59
Level 4	491	12.26	None	491	1.73
Grades 6–8					
Level 2	417	9.64	None	417	3.81
Level 3	473	7.99	0.5	477	1.09
Level 4	501	9.18	None	501	1.45
Grade 10					
Level 2	429	10.56	None	429	3.38
Level 3	478	9.11	1	487	0.66
Level 4	503	9.68	1	514	1.77

Exhibit 14: Panel Recommended and Adjusted Final Cut Scores—Mathematics

Performance Level	Panel Recommended Cut Scores		Adjustment to Final Cut Scores		
	Scale Score	Scale Score Standard Error of Measurement (± SEM)	Level of Adjustment (± SEM)	Final Cut Scale Score	Standard Error of Cut Scale Score
Grades 3–5					
Level 2	423	10.22	-1	413	0.66
Level 3	476	9.59	None	476	0.21
Level 4	526	14.48	None	526	4.63
Grades 6–8					
Level 2	425	10.18	None	425	0.50
Level 3	476	9	1.5	489	0.16
Level 4	529	10.46	0.5	534	0.74
Grade 10					
Level 2	434	11.93	None	434	2.19
Level 3	476	14.76	1.5	498	1.97
Level 4	528	13.19	1	541	3.82

Exhibit 15: Panel Recommended and Adjusted Final Cut Scores—Science

Performance Level	Panel Recommended Cut Scores		Adjustment to Final Cut Scores		
	Scale Score	Scale Score Standard Error of Measurement (± SEM)	Level of Adjustment (± SEM)	Final Cut Scale Score	Standard Error of Cut Scale Score
Grades 3–5					
Level 2	430	10.83	None	430	1.51
Level 3	474	10.36	-0.5	469	3.25
Level 4	496	10.38	None	496	0.81
Grades 6–8					
Level 2	447	9.66	None	447	0.06
Level 3	484	9.61	0.5	489	0.50
Level 4	514	11.33	None	514	0.95

Grades 10					
Level 2	463	11.72	None	463	4.71
Level 3	492	14.44	1	506	8.13
Level 4	535	14.78	None	535	1.45

Exhibit 16: Panel Recommended and Adjusted Final Cut Scores—Social Studies

	Panel Recommended Cut Scores		Adjustment to Final Cut Scores		
Performance Level	**Scale Score**	**Scale Score Standard Error of Measurement (± SEM)**	**Level of Adjustment (± SEM)**	**Final Cut Scale Score**	**Standard Error of Cut Scale Score**
Grades 3–5					
Level 2	423	16.64	None	423	2.98
Level 3	485	14.39	0.5	492	11.93
Level 4	549	14	None	549	2.04
Grades 6–8					
Level 2	439	14.04	None	439	5.96
Level 3	490	12.58	1.5	503	1.28
Level 4	560	26.91	None	560	10.57

The final cut scores, the percentage of students performing at each performance level, and cumulative percentage of students at or above each level are presented in Exhibit 17 through Exhibit 20. The final cut scores were approved by the State Superintendent of Education and were presented to the South Carolina State Board of Education, September 12, 2007.

Exhibit 17: Percentage of Students at Each Performance Level—ELA

Performance Level	Scale Score Cut Score	Percentage in Level	Cumulative Percentage (at and above) for Each Performance Standard
Grades 3–5			
Level 1	—	12.6 %	100.0 %
Level 2	403	25.4 %	87.4 %
Level 3	466	21.9 %	62.0 %
Level 4	491	40.1 %	40.1%

Grades 6–8			
Level 1	—	12.9 %	100.0 %
Level 2	417	23.3 %	87.2 %
Level 3	477	14.9 %	63.9 %
Level 4	501	49.0 %	49.0 %
Grade 10			
Level 1	—	13.4 %	100.0 %
Level 2	429	23.6 %	86.6 %
Level 3	487	12.5 %	63.1%
Level 4	514	50.6 %	50.6 %

Exhibit 18: Percentage of Students at Each Performance Level—Mathematics

Performance Level	Scale Score Cut Score	Percentage in Level	Cumulative Percentage (at and above) for Each Performance Standard
Grades 3–5			
Level 1	—	14.3 %	100.0 %
Level 2	413	30.8 %	85.7 %
Level 3	476	29.3 %	54.9 %
Level 4	526	25.7 %	25.7 %
Grades 6–8			
Level 1	—	15.9 %	100.0 %
Level 2	425	28.5 %	84.1%
Level 3	489	25.9 %	55.6 %
Level 4	534	29.8 %	29.8 %
Grade 10			
Level 1	—	16.1 %	100.0 %
Level 2	434	30.1 %	84.0 %
Level 3	498	28.9 %	53.9 %
Level 4	541	24.9 %	24.9 %

Exhibit 19: Percentage of Students at Each Performance Level—Science

Performance Level	Scale Score Cut Score	Percentage in Level	Cumulative Percentage (at and above) for Each Performance Standard
Grades 3–5			
Level 1	—	19.8 %	100.0 %
Level 2	430	18.2 %	80.2 %
Level 3	469	17.5 %	62.0 %
Level 4	496	44.5 %	44.5 %
Grades 6–8			
Level 1	—	22.1 %	100.0 %
Level 2	447	18.5 %	77.9 %
Level 3	489	15.3 %	59.3 %
Level 4	514	44.0 %	44.0 %
Grade 10			
Level 1	—	25.3 %	100.0 %
Level 2	463	25.0 %	74.7 %
Level 3	506	16.1 %	49.7 %
Level 4	535	33.6 %	33.6 %

Exhibit 20: Percentage of Students at Each Performance Level—Social Studies

Performance Level	Scale Score Cut Score	Percentage in Level	Cumulative Percentage (at and above) for Each Performance Standard
Grades 3–5			
Level 1	—	19.3 %	100.0 %
Level 2	423	32.7 %	80.7 %
Level 3	492	30.1 %	48.1 %
Level 4	549	18.0 %	18.0 %
Grades 6–8			
Level 1	—	19.7 %	100.0 %
Level 2	439	27.3 %	80.3 %
Level 3	503	34.1 %	53.0 %
Level 4	560	19.0 %	19.0 %

Chapter 5: Technical Characteristics and Interpretation of Student Scores

This section describes the psychometric analyses conducted as part of the South Carolina Alternate Assessment (SC-Alt) 2007 operational administrations in English language arts (ELA), mathematics, and science. The analysis and scaling of the spring 2007 social studies field-test administration is also presented. These analyses are intended to ensure the quality of the items, the assessment materials and instruments, and the score-reporting scales as measures of state academic standards.

As a reminder to the reader, there are three grade-band forms in each content area: elementary school (grades 3–5), middle school (grades 6–8), and high school (grade 10). At each grade band, the assessments have three potential starting tasks that correspond to three levels of task complexity (high, moderate, and low). Students are assigned to a starting task on the basis of teacher judgments recorded in the Student Placement Questionnaire (SPQ) for each content area. Linking tasks connected the grade-band forms so that the vertical test scale could be created.

Analysis and Scaling of Items, Tasks, and Test Forms

The ELA, mathematics, and science assessments received comprehensive psychometric analyses, including initial item calibrations, after their earlier field testing. Final calibrations were estimated for these content areas on the basis of operational data gathered during the spring 2007 operational administration. Calibrations based on operational data were considered superior to those based on field-test data. The vertical scales were also defined using the linking tasks as the vehicle that connected the elementary, middle, and high school forms.

AIR calibrated the operational items, estimated examinee proficiencies, and calculated scale scores and achievement levels for operational forms. This process entailed examining item statistics to ensure quality measurement across the range of the assessment, calibrating the items within each content area to a common scale, then applying a maximum-likelihood (ML) scoring algorithm to each student's responses to estimate his or proficiency scores and assign the correct achievement level.

Assignment of Examinees to Starting Tasks and Item Calibration and Test Forms Linking

All eligible students participated in the spring 2007 test administrations. The case counts of approximately 1,000 students each in elementary and middle school and 350 students in high school, per content area, enabled effective calibration across task starting points and grade bands. Students were assigned to one of three starting points on the basis of the sum of the teacher responses on the SPQ. The SPQ cut scores were shown to correlate with student achievement scores on the 2006 field-test administrations (see the 2006 field test technical report for details). The assignment of student starting task based on the SPQ cut scores was intended to expose students to items that were ideally suited to their current level of achievement while ensuring that (a) each student responded to an adequate number of items so that reliable and content-valid proficiency scores could be estimated and (b) an adequate number of students responded to each item for the joint calibration to be reliable.

Teachers were instructed to administer all tasks associated with the assigned starting point, with provisions for dropping to a lower starting point (task) if the student was unable to

respond to the items in the tasks at the assigned starting point. Students who were assigned to high and moderate levels of the assessment but were unable to respond to items in the tasks at those levels may have been moved back to a less difficult starting point.

The linking design allowed a joint (concurrent) calibration of all items within a content area and the placement of the items on a common difficulty scale. The tasks actually used to link the grade-band forms (linking tasks) were selected, in part, on the basis of their moderate difficulty levels. Moderately difficult tasks contribute to more-stable linking across levels than tasks that may be either too easy or too difficult for the examinees.

Linking cross grade-band forms was accomplished by using common tasks across grade bands. Some of the tasks from the elementary form are on the middle school form; some of the tasks from the middle school form are on the high school form. (Details are described in the earlier section "Linking Tasks in Each Grade Band Assessment.") In general, tasks are assigned in such a manner that the forms increase slightly in difficulty as examinees progress through the grade bands. This means that a task assigned to the moderate level of complexity in the elementary form may be assigned to the low-moderate level in the middle school form.

A similar linking design was employed for the social studies field-test forms.

See appendix E for a summary of the linking design in each of the four content areas.

Analysis Plan

AIR's analyses presented in the remainder of this chapter were conducted in five steps;

1. data preparation and quality control,
2. classical item analysis,
3. review of items not meeting psychometric criteria for inclusion on operational forms,
4. joint calibration of items according to the Rasch model, and
5. final achievement estimation and scale score calculation for operational forms.

Data Preparation and Quality Control

Before analyzing the operational test data, AIR psychometricians performed a number of quality control procedures to ensure that scanning operations resulted in accurate data capture of the teacher-recorded student responses. Prior to the test administration, AIR verified all of the point values for each form's answer folder. For each form, two AIR staff members independently verified the possible responses and point values for each item.

After receiving the scanned test data, AIR analysts carefully examined the data file to verify its accuracy. Descriptive statistics were computed to ensure that student case counts on the pre-identification file generally corresponded to the actual counts based on test data at the state, school, and classroom levels. In addition, AIR verified that the total number of items in the data file matched the number of items on the answer folder and in the test booklet, and examined the frequency distributions of item responses to identify potential scoring problems, such as out-of-range values or unused response categories.

For purposes of item analysis and student scoring, respectively, non-response (NR) data were treated in two different ways:

For *item analysis and calibration purposes*, a student had to have at least three scored responses for the testing attempt to be considered valid. To be considered a scored response, the test administrator had to have assigned a numeric score (0–4) to the student's response. If the administrator scored NR for all items in a task, the task was treated as not administered, and NR values were recoded as missing.

For *operational scoring* of student responses and estimation of student proficiency, however, the NR codes were treated as indications that the item was administered and that the student did not possess the content-area knowledge and skill to respond. In this case, all NR values were recoded as zeroes and included in the student proficiency estimates. Following this recoding, tests were reexamined to determine the number of scored responses (0–4) in each content area. For operational scoring, a student had to have at least five scored responses of any kind for the assessment to be considered a valid attempt within a content area.

After the accuracy of the data file was verified, classical item analyses and Item Response Theory (IRT) analyses were performed. Several quality-control procedures were taken to ensure the accuracy of these analyses.

As an initial step, the program control file was checked by two data analysts to ensure that form layout was correctly specified and that item response values were correct. As a second step, two analysts independently performed all analyses. Results of the parallel analyses were compared for mistakes by using commercially available file comparison software. Last, the analysis results were spot-checked by using other commercially available statistical software to ensure that the results were consistent across statistical software packages. *These comprehensive quality control steps are highly effective in detecting any issues that might influence the interpretation of the item analysis results.*

Classical Item Analysis

Classical item analysis for the SC-Alt operational and field-test forms was conducted using the *AM* statistical software (http://am.air.org). The item analysis yielded the proportion of students in each response category, the percentage of omitted responses for that item,[1] and the proportion of students who were unable to respond to the item because of access limitations (where relevant). Correlations between the item score and the test score were computed using adjusted polyserial correlations. For purposes of calculating item statistics, omitted items were treated as incorrect when there was at least one scored response within the same task, see above. Minimum and maximum point values, average item scores, and adjusted item-total polyserial correlations were calculated for all items.

Test form statistics, such as internal consistency reliability estimates and standard error of measurement statistics, were suppressed at this point because all students were not expected to

[1] An item was considered omitted if no response was recorded for the item (or the test administrator marked NR on the student score sheet), but the student responded to subsequent items on the task.

take all items. Such statistics would be misleading before Rasch scoring was applied. Special marginal reliability analyses used to determine the reliability of the student score estimates are described in a later section of this chapter.

The proportion of students in each score-point category was calculated as defined by the item's scoring guidelines, as well as the proportion of students with blank responses within attempted tasks (i.e., those with at least one scored response). Item difficulty was computed as the mean score on the item across all students taking the form and with a scored response on that item. The average proportion of total points, calculated as the mean score divided by the total number of points possible on the item, serves as an additional measure of item difficulty.

Review of Items Not Meeting the Specified Psychometric Criteria

Classical item analysis provided information about the technical quality of the items; items failing to meet specified psychometric criteria were flagged for subsequent review. During field-testing of ELA and mathematics (in spring 2006), science (in fall 2006), and social studies (in spring 2007), AIR reviewed all flagged items in concert with SCDE to determine whether they were of sufficient psychometric quality. For the 2007 operational forms in English language arts, mathematics, and science, AIR conducted a statistical review of the items to determine whether any operational items were performing in an unacceptable fashion.

All item reviews were conducted using polytomous item flagging rules that AIR has put in place for other alternate assessments. Items were flagged for review for any of six reasons:

- Item-total score correlation was negative.
- The mean proportion correct did not decrease for each successive score category.
- Item difficulty value indicated that the item was extremely difficult or extremely easy.
- The omit rate was high.
- Differential item functioning (DIF) was present.
- Item fit statistics were unacceptable.

Adjusted polyserial correlations were flagged if they were less than .20. Near zero or negative adjusted polyserial correlations may indicate a flawed scoring rubric, mis-ordering of response categories, reader difficulties in interpreting the rubric, or an item that does not measure the construct of interest.

Items were also flagged if the mean proportion correct (of items attempted) of students in a score point category was lower than the mean proportion correct of students in the next lower score point category. For example, an item was flagged if, on average, students who received 3 points on the item got a lower proportion of the total points possible on items with scored responses than students who received only 2 points on the item. This situation may indicate that the scoring guidelines are flawed. This flag was interpreted conservatively, because students may take items with different average difficulty levels.

Items were flagged if the proportion of students in any score point category was greater than .95. A very high proportion of students in any single score point category may suggest that

the other score points are not useful or, if the score point is the minimum or maximum score point category, that the item may not be appropriate for students at that complexity level. Analysts must take into account the item-total score correlation as well as possible instructional factors when interpreting the statistic.

Items with omit rates greater than 5% were flagged. High rates of response omission may indicate confusion by test takers or administrators on how to respond to the item, excessive test speededness, or an item that was too difficult. It was expected that rates of omission may be somewhat higher for the alternate assessment population, so this was not considered a critical problem.

AIR conducted analyses of differential item functioning (DIF) on all test items to detect potential item bias. The purpose of these analyses was to identify items that may favor students in one group over students of similar achievement in another group. AIR conducted DIF analyses that compare African American/White, and female/male student subgroups. The sample sizes were very small for each subgroup (see the demographic tables in the previous section); thus, DIF analyses have limited utility. However, DIF statistics were calculated for the purposes of item review.

For polytomous items, both the Mantel-Haenszel chi-square (*MH* χ^2) (Zwick & Thayer, 1996; Zwick, Donoghue, & Grima, 1993) and the Standardized Mean Difference (SMD) index (Dorans & Kulick 1986) were calculated. The classification rules are defined in Exhibit 21. Items in the "C" DIF category, indicating evidence of differential item functioning on the items, were flagged for review.

Exhibit 21: Summary of DIF Classification Rules for Polytomous Items

DIF Category	Rule
C	The p-value of MHχ^2 is less than .05 and |SMD|/|SD| is greater than 0.25.
B	The p-value of MHχ^2 is less than .05 and |SMD|/|SD| is greater than 0.17 and less than 0.25.
A	The p-value of MHχ^2 is not significant at the .05 level or |SMD|/|SD| is less than 0.17.

In addition, items were flagged on the basis of criteria set for INFIT and OUTFIT statistics produced by WINSTEPS. This is described in greater detail in the "Item Response Theory Calibration and Linking Test Forms" section of this chapter.

Items flagged on the basis of any of the aforementioned criteria were reviewed by AIR psychometricians and SCDE officials. First, a team of AIR psychometricians reviewed all flagged items to ensure that the data were accurate and properly analyzed, that response keys were correct, and that there were no obvious problems with the items. AIR recommended whether the item should be retained in the item pool or discarded, depending on the reason for the item flag and its effect on the quality of the assessment as a whole. SCDE had the final

authority on whether the flagged items should be included in the operational scoring based on the item statistics and content appropriateness of the items. Additional information on the SCDE review of operational item statistics is available from SCDE in the Response of SCDE to the South Carolina Educational Oversight Committee Recommendations, November 19, 2007.

No items on the operational forms (ELA, mathematics, science) were found to violate the psychometric criteria so severely that they needed to be removed from scoring.

Item Response Theory Calibration and Linking Test Forms

This section describes AIR's procedures for item calibration using IRT techniques. Item parameters were estimated using the Partial Credit model (Masters, 1982) approach available using Winsteps software. A common item design was used to enable simultaneous calibration and linking across grade-band test forms in each content area. Items were jointly calibrated across grade bands in a single Winsteps run for each content area. This calibration approach put the item parameters of all grade-band test forms within a content area on the same scale.

For 2007, the results reported on the vertical scale are in Exhibit 22 - Exhibit 25. Several things to notice in these exhibits are that the mean scores show a general upward trend across grades. This indicates that a vertical scale is a useful way to describe the results of this population of students. Second, in almost every grade band, a few students were at the floor of the test (minimum scaled score equal to 260), but very few reached the ceiling (maximum scaled score equal to 740).

An important feature of the South Carolina alternate assessment is the vertical scale that permits the measurement of student progress on the state content standards over time. Such a scale provides educators and parents with information that can be useful for monitoring student performance as students move through grades over time.

The development of this scale required the use of a common item linking design. In a common item design, *linking items* appear on the higher grade band assessment as well as on the lower grade band assessment. These linking items allow for the grade-band scales to be connected, thus establishing the vertical scale.

There are at least two features of this linking design that warrant clarification. First, the linking items are the same (i.e., they are the same items) between two grade band forms. They are connected to grade-specific standards in the higher grade as well as in the lower grade. As a result, students are never exposed to off-grade level content since the common items serve a dual purpose in measuring content in both grade bands. Second, even though the same forms will be used the first two years of administration (pending planned new task and item development), it is not likely that exposure of the items to the students would trigger responses based on the recollection of any item's administration the previous year. As students grow academically their starting task will likely change each year. New starting tasks result in a portion of the items any student receives to be unique each year.

The South Carolina Department of Education is in the process of evaluating growth models under a federal grant (Modifications, Accommodations, Reports, and Standards) The use

of the extant vertical scale for SC-Alt will facilitate deliberations for the possible implementation of a growth model for the alternate assessment.

Exhibit 22: ELA Scale Score Statistics, by Grade Band, Overall, and by Disability

Disability	Grade Band	Mean	SD	Min	Max	N
Overall	3–5	478	78	260	721	1,082
	6–8	494	81	260	707	1,004
	10	510	90	260	729	345
Severe Mental Disability	3–5	376	72	260	509	127
	6–8	377	71	260	517	105
	10	387	65	260	512	33
Moderate Mental Disability	3–5	470	57	260	646	374
	6–8	495	56	260	707	438
	10	500	69	260	671	163
Mild Mental Disability	3–5	540	55	391	704	249
	6–8	560	62	260	707	212
	10	577	79	272	729	82
Autism	3-5	473	58	260	704	201
	6-8	476	70	260	617	156
	HS	501	80	260	729	43

Exhibit 23: Mathematics Scale Score Statistics, by Grade Band, Overall, and by Disability

Disability	Grade Band	Mean	SD	Min	Max	N
Overall	3–5	480	74	260	698	1,080
	6–8	493	83	260	705	1,000
	10	497	87	260	718	350
Severe Mental Disability	3–5	381	65	260	535	127
	6–8	376	69	260	506	103
	10	374	74	260	496	33
Moderate Mental Disability	3–5	470	50	260	624	373
	6–8	490	58	260	705	440
	10	485	64	260	590	163
Mild Mental Disability	3–5	541	53	387	698	249
	6–8	562	64	260	705	210
	10	560	78	292	718	85

Autism	3–5	478	55	260	612	200
	6–8	477	69	260	619	154
	10	491	63	292	590	45

Exhibit 24: Science Scale Score Statistics, by Grade Band, Overall, and by Disability

Disability	Grade Band	Mean	SD	Min	Max	N
Overall	3–5	477	75	260	671	1,079
	6–8	494	81	260	740	1,000
	10	500	94	260	740	349
Severe Mental Disability	3–5	370	71	260	538.	126
	6–8	371	70	260	525	104
	10	361	77	260	493	34
Moderate Mental Disability	3–5	474	57	260	626	374
	6–8	498	58	260	740	436
	10	494	75	260	680	162
Mild Mental Disability	3–5	533	45	356	671	248
	6–8	559	60	260	729	212
	10	561	74	325	740	84
Autism	3–5	473	58	260	616	200
	6–8	472	68	260	667	155
	10	493	68	260	642	45

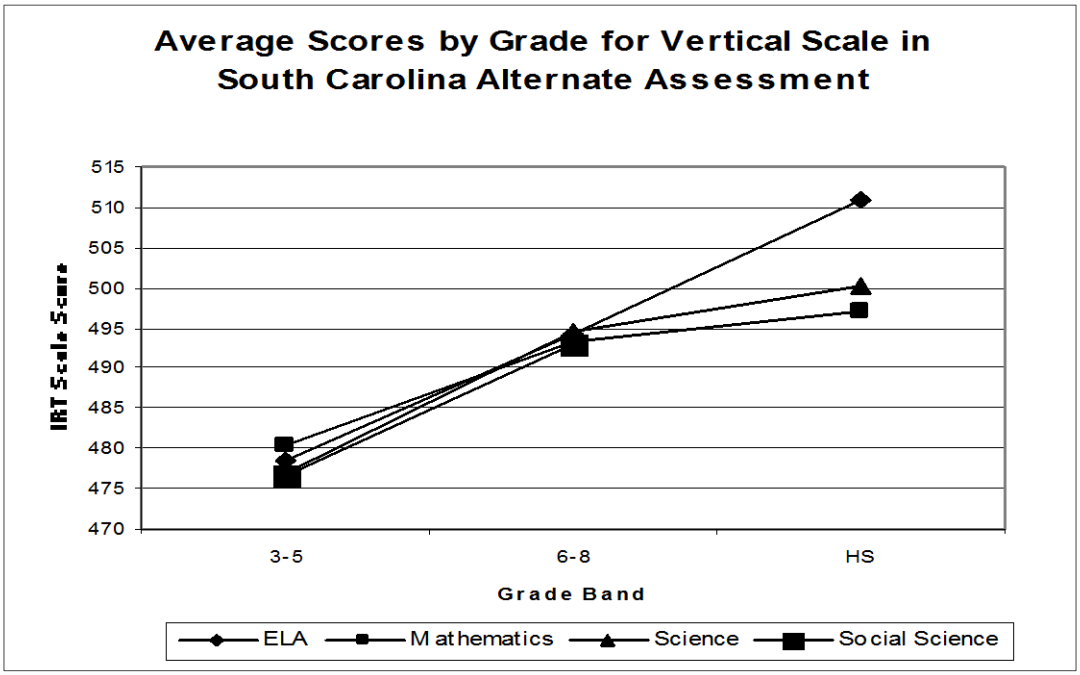
Exhibit 25: Social Studies Scale Score Statistics, by Grade Band, Overall, and by Disability

Disability	Grade Band	Mean	SD	Min	Max	N
Overall	3–5	476	80	260	668	1,069
	6–8	492	83	260	740	994
	10	x	x	x	x	x
Severe Mental Disability	3–5	355	72	260	549	124
	6–8	363	75	260	536	102
	10	x	x	x	x	x
Moderate Mental Disability	3–5	474	60	260	589	372
	6–8	498	61	260	740	433
	10	x	x	x	x	x
Mild	3–5	535	46	318	668	247

Mental	6–8	554	53	260	740	211
Disability	10	x	x	x	x	x
Autism	3–5	477	65	260	668	197
	6–8	478	68	260	660	156
	10	x	x	x	x	x

A graph of the overall pattern of performance on the vertical scale is shown in Exhibit 26. Again, there is a general upward trend across all grade bands in each of the four subject areas. This graph shows that the vertical scale in the South Carolina Alternate Assessment was successful at capturing growth across grade bands.

Exhibit 26: Overall Pattern of Performance on the Vertical Scale



To evaluate item fit, we examined the item fit statistics provided by Winsteps. The mean square INFIT and mean square OUTFIT statistics reported by Winsteps are based on weighted and unweighted standardized residuals for each item response, respectively. These statistics indicate the discrepancy for each item between observed item responses and the item responses predicted under the Rasch model. Both fit statistics have an expected value of 1. Values substantially greater than 1 indicate unmodeled noise (model underfit), and values less than 1 indicate a lack of stochasticity (model overfit).

Because it is weighted by the variance of a person's response to an item, the INFIT statistic is sensitive to deviations from expected response patterns among high information items (i.e., items with locations near the theta estimate for the student) that could indicate structural problems with test items or test form construction (e.g., mis-keyed items, items not measuring the common underlying construct; conversely, excessive redundancy in item content resulting in over-determined response patterns).

The OUTFIT statistic, an unweighted mean square, is sensitive to low information responses (e.g., easy items missed by high-ability students, difficult items correctly answered by low-ability students) and may therefore indicate the presence of outliers (Linacre & Wright, 1994). Items were flagged if the mean square INFIT or OUTFIT values were less than 0.7 or greater than 1.3. Misfitting items were evaluated in conjunction with the classical item analysis results to determine whether items should be included in the operational pool. We reviewed item fit as part of the scaling process and the item-data review process. No items were excluded from scaling because of misfit.

Using Item Responses to Estimate Student Proficiency

This section describes the estimation of student proficiency for the SC-Alt operational administration of English language arts, mathematics, and science assessments for elementary, middle, and high school. Student proficiency scores were also produced from the 2007 social studies field test administration for technical reporting and review, but were not reported to districts, schools, or parents. This section includes a description of the estimation procedures used to determine student proficiency based on the items administered, the transformation of proficiency estimates on the Rasch theta scale into scale scores, and the relation of achievement estimation to reliability estimation.

Student proficiency scores were estimated using a maximum-likelihood approach based on the scored items for each student.[2] This method calculates the theta score that maximizes the likelihood function of the given item responses for each student. Comparable scale-score estimates from these different item responses were achieved through the measurement-invariance property of IRT ability estimates, even when students were exposed to different ranges of items.

Under the Rasch-based IRT model, there is a one-to-one correspondence between the estimated theta score and the total raw score for a specific set of items. However, in the SC-Alt assessments, each student can take different sets of items. Using the pattern scoring method for calculating theta scores, we ensured that (a) two students who took the same items and achieved the same item scores were assigned the same theta score, and (b) students who took more difficult items were assigned higher theta scores than students with the same raw scores who took less difficult items. Thus, the scoring method took into account both the number of raw score points the student achieved and the difficulties of the items the student responded to. This scoring process was performed separately for each content area.

Once theta values had been estimated for each student, AIR converted the theta estimates to scale scores using a scale metric determined by SCDE in consultation with AIR. The SC-Alt assessments were scaled to have a mean of 500 and a standard deviation of 80 on the vertical scale for the grade band 6–8 assessment. The grade band 3–5 and grade 10 assessment means and standard deviations were calculated in relation to grade band 6–8 mean and standard deviation. This was done by performing a linear transformation of the Rasch theta scale for each content area, fixing the mean of the middle school test form scale at 500, and multiplying the student's theta deviation score by 80 as shown in the formula below:

$$y_{ijk}^{*} = 500 + \left(\frac{\hat{\theta}_{ijk} - \hat{\mu}_{k}}{\hat{\sigma}_{k}}\right) * 80,$$

where

i indexes student;

j indexes grade band;

k indexes content area;

[2] The first step in this process was to rescore student responses consistent with the operational scoring method described under the "Data Preparation and Quality Check" section.

y^*_{ijk} is the scale score for student *i* in grade band *j* and content area *k*, given estimated ability, θ_{ijk};

$\hat{\mu}_k$ is the content-area-specific mean for the middle school test form; and

$\hat{\sigma}_k$ is the content-area-specific standard deviation for the middle school test form.

SCDE also decided to truncate the scale score ranges so that the lowest possible scale score was 260 and the highest possible scale score was 740. Student scale score estimates were truncated to the smallest whole integer (e.g., an estimated scale score of 440.60 would become 440). Additionally, scale scores were calculated and checked using a method similar to the process for total raw data.

Once scoring was completed, it was possible to estimate the internal consistency score reliability of the grade-band assessments by estimating the marginal measurement error across students. These estimates produced different standard errors for each student, depending on the items they were given and their level of performance on those items. Then, this value was used to determine the score reliability as the proportion of true score variance to observed score variance. We estimated this value within each content area (a) across the entire theta scale, (b) across grade-band forms, and (c) for each starting point within a grade band.

Test Score Reliability

This section provides the marginal reliability for each grade band, content area, and groups of students beginning at each starting task determined by the SPQ for the spring 2007 administration.

Classical test theory–based reliability indices, such as Cronbach's alpha, were not appropriate for the SC-Alt because the length of the test and the subset of items differed for each student. The reliability coefficient for the SC-Alt was, therefore, calculated as the *marginal reliability* (Sireci, Thissen, & Wainer, 1991), which is equivalent in interpretation to classical internal consistency estimates of reliability.

First we determined the marginal measurement error variance, $\overline{\sigma}^2_{e^*}$, across all examinees:

$$\overline{\sigma}^2_{e^*} = \int \sigma^2_{e^*} p(\theta) d\theta = \frac{\sum \sigma^2_{e^*}}{N},$$

where $\sigma^2_{e^*}$ is the square of the standard error of student ability estimate, $\hat{\theta}$. Thus, the marginal measurement error variance could be estimated as the average of squared standard error of $\hat{\theta}$.

Then we estimated the marginal reliability as

$$\overline{\rho} = \frac{\hat{\sigma}^2_\theta - \overline{\sigma}^2_{e^*}}{\hat{\sigma}^2_\theta},$$

where $\hat{\sigma}^2_\theta$ is the variance of observed θ estimates.

The marginal reliability estimate, $\overline{\rho}$, can be interpreted similarly to classical reliability indices such as Cronbach's alpha. Estimates of the marginal reliability for the test forms corresponding to the three SC-Alt grade band assessments can be seen in Exhibit 27.

Exhibit 27: Marginal Reliability by Grade Band and Subject

	ELA		Mathematics		Science	
Grade Band	**N**	**Reliability**	**N**	**Reliability**	**N**	**Reliability**
Grades 3–5	1082	0.916	1080	0.906	1079	0.900
Grades 6–8	1004	0.911	1000	0.909	1000	0.902
Grade 10	345	0.907	350	0.907	349	0.885

All marginal reliability estimates exceeded 0.885. This suggests that majority of the variability in student scores was due to student achievement rather than from the sampling of items from within the content domain.

Appendix G shows the marginal reliability estimates broken out further by groups of students beginning at each starting task, as determined by the SPQ.

Classification Accuracy

This section describes the extent to which student achievement-level classifications were accurate across students. Classification accuracy was estimated for each cut score as the average probability of correct performance-level assignments across all examinees (assignments above or below the cut score) given each examinee's estimated proficiency score, θ_i:

$$\mathrm{CA_K} = \frac{\sum_{k \geq K} P(\theta_i \geq \theta_K^* \mid \theta_i, k_i)}{N_{k \geq K}} + \frac{\sum_{k < K} 1 - P(\theta_i \geq \theta_K^* \mid \theta_i, k_i)}{N_{k < K}},$$

where

θ_i is the proficiency (i.e., theta) of student i,

k_i is the performance level of student i,

θ_K^* is the cut score for the performance level K on the theta scale,

$N_{k \geq K}$ is the number of students with θ_i at or above the cut score θ_K^*, and

$N_{k < K}$ is the number of students with θ_i below the cut score θ_K^*.

Thus, $P(\theta_i \geq \theta_K^* \mid \theta_i, k_i)$ was the probability of students with θ_i and the performance level k_i to be at and above the cut score K. Classification accuracy is the expected rate of correct

classification; therefore, higher values indicated superior classification accuracy. Exhibit 28 shows the classification accuracy by content areas, performance levels, and grade bands.

Exhibit 28: Classification Accuracy

Subject	Performance Level Cut Score	Grade Band			Overall
		3–5	6–8	10	
English Language Arts	Level 2	0.941	0.931	0.930	0.935
	Level 3	0.848	0.898	0.915	0.878
	Level 4	0.884	0.897	0.909	0.893
Mathematics	Level 2	0.915	0.903	0.941	0.913
	Level 3	0.859	0.889	0.861	0.872
	Level 4	0.858	0.888	0.915	0.879
Science	Level 2	0.894	0.904	0.896	0.899
	Level 3	0.863	0.885	0.850	0.871
	Level 4	0.872	0.875	0.870	0.874

According to the estimates in Exhibit 28 , 94% of students were correctly classified (a) in Level 1 or (b) in Level 2 or above for the grade band 3–5 English language arts assessment. All students in all levels had a probability greater than .848 of being classified accurately.

The calculation of probability of the correct performance level for students is described in the following section.

Calculation of the Probability of Being Classified Above a Cut Score Given the Student's Theta Score

For each student we can compute the likelihood of theta $L(\theta \mid \mathbf{z}, \mathbf{b})$. Suppose that the prior of the theta distribution is $f(\theta)$. Then, using Bayes' rule, we have

$$f(\theta \mid \mathbf{z}, \mathbf{b}) \propto f(\theta) L(\theta \mid \mathbf{z}, \mathbf{b}),$$

where $L(\theta \mid \mathbf{z}, \mathbf{b})$ is the likelihood of theta given the response $\mathbf{z}$ and item parameters $\mathbf{b}$; hence, the probability at and above cut is

$$P = \frac{\int_{\theta \geq \theta_{\text{cut}}} f(\theta) L(\theta \mid \mathbf{z}, \mathbf{b}) d\theta}{\int f(\theta) L(\theta \mid \mathbf{z}, \mathbf{b}) d\theta},$$

where $f(\theta)$ can take different distribution such as normal, or uniform, depending on our prior belief.

Calculation of $L(\theta \mid \mathbf{z}, \mathbf{b})$

For the Rasch model, we have

$$L(\theta \mid \mathbf{z}, \mathbf{b}) = \prod_{i \in MC} \left(\frac{Exp(z_i\theta - b_i z_i)}{1 + Exp(\theta - b_i)} \right) \prod_{i \in CR} \left(\frac{Exp(z_i\theta - \sum_{k=1}^{z_i} b_k)}{1 + \sum_{i=1}^{K_i} Exp(\sum_{k=1}^{i} (\theta - b_k))} \right)$$

$$\propto Exp(r\,\theta) \prod_{i \in MC} \left(\frac{1}{1 + Exp(\theta - b_i)} \right) \prod_{i \in CR} \left(\frac{1}{1 + \sum_{i=1}^{K_i} Exp(\sum_{k=1}^{i} (\theta - b_k))} \right)$$

where K_i is the maximum score for item *i* when this item is a CR item. It can be noted that the calculation above depends on total raw score r only when using the attempted items.

Chapter 6: Score Reports

This chapter describes the method used for reporting scores on the SC-Alt for the spring 2007 administration. An Individual Score Report (ISR) is included in appendix H as an example of the highly detailed and diagnostic nature of the reports. This chapter gives a brief overview of how scores on the SC-Alt assessments are reported; a more detailed description is available in a separate *Score Reports User's Guide*.

The SC-Alt assessments have three types of score reports: the ISR, or family report; school reports; and district reports. Each report conveys specific information to its target audience. The reports are designed to be easily used by parents and educators. Of particular note, the reports include in-depth information about what students know and can do relative to the South Carolina academic content standards and to the performance levels.

The ISR provides specific performance feedback for each student across three content areas: mathematics, English language arts, and science (social studies will be added in 2008). Within each content area, a graphic bar highlights the student's performance level along the proficiency scale. Each performance level is described in broad, easy-to-understand content terms. Further descriptions of what a student knows and can do are tailored and printed for each obtained performance level. For example, if a student is classified as Level 3 in mathematics, the following message is printed: "Students who score at Level 3 should be able to add and subtract simple numbers, count and compare objects in a group, compare objects by color, size, or shape, identify three-dimensional shapes, and read information in a graph." (Note: Scale scores will be added to the ISR for 2008 reporting.)

Specific activities, based on each student's performance level for each content area, are presented for the family to engage in at home to help ensure positive academic growth in the content area.

The school report provides a summary of the performance of each student in the school. The list of students is organized alphabetically and, in addition to achievement data, contains basic demographic information and test form administered. A scale score and achievement level are listed for each student for each content area. A school summary is included, showing the number of students scoring at each performance level.

Three district-level reports are issued. The district roster summary report displays the roster of the district's tested students along with their demographic information, their scale scores and performance levels for each content area, and type of test form. The district summary by test form report presents a roster of schools in which students were tested, identifying the test form and giving the number of students tested in each content area and the percentages achieved in each performance level by content area. The total number of students tested with each form and their performance-level distributions by content area are listed at the bottom of the report. The district demographic summary report shows the number of students tested and the distributions of performance levels in all content areas, disaggregated by gender, ethnicity, lunch program, migrant status, and ESL status.

The separate *Score Reports User's Guide* has more-specific information on how to interpret student scores and score reports and how to relate academic growth as measured by the SC-Alt to classroom curricula and activities. The guide has been widely distributed throughout South Carolina.

Chapter 7: Student Performance Data from the Spring 2007 Administration

Performance data from the spring 2007 administration are presented in this chapter. Since this was the first operational administration of the SC-Alt, these data form the initial performance baseline to which performance in subsequent years will be compared.

A total of 2445 students from 83 school districts and 460 schools were tested with the SC-Alt in spring 2007. The total number of tested students with one or more valid content area score was 1085 for the elementary form, 1009 for the middle school form, and 351 for the high school form.

Approximately one-half of the participating school districts (42; 50.6%) tested 15 or fewer students, 28 districts (33.7%) tested 16-45 students and 13 districts (15.7%) tested 46-254 students each. Only four districts tested more than 100 students. Of the 460 schools testing SC-Alt students, 303 (65.9%) tested 5 or fewer students, 113 (24.6%) tested 6-10 students, 36 (7.8%) tested 11-20 students, and 8 schools (1.7%) tested 21-67 students. Only two schools, which were special education center schools, tested more than 37 students each (58 and 67 students).

The elementary school form was developed to be administered to students who are 8, 9, or 10 years old at the beginning of the school year, which are the ages typical of students enrolled in grades 3, 4, and 5. The middle school form was developed for students of ages 11, 12, and 13 (typical of students enrolled in grades 6, 7, and 8), and the high school form was developed for students aged 15 (typical age of students in grade 10).

Students who are reported as tested with the elementary and middle school forms with ages outside of the specified ages were assigned the forms by the test administrator by error, or in some cases may appear due to errors in the coding of birthdates on the data files. The numbers of students reported outside of the expected ages for the elementary and middle school forms is approximately 1% for each content area. Students reported as having been tested on the high school form with ages below 15 appear due to form assignment or birth date errors. Students older then 15 (e.g., 16) are assessed with the high school form if they have not been assessed at the high school level previously.

The performance of students by grade band form and student age for the ELA, mathematics, science, and social studies content areas is presented in Exhibit 29 - Exhibit 32. The performance of students by grade band and demographic group is presented in Exhibit 33 - Exhibit 43.

Exhibit 29: Performance by Grade Band Form and Student Age – ELA

Student Age	N	MEAN SS	SD OF SS	Performance by Achievement Level				
				% Level 1	% Level 2	% Level 3	% Level 4	% Level 3 and Above
ELEMENTARY FORM								
7	2	.	.	.	.	.	.	.
8	366	468.9	78.7	13.9	27.1	23.0	36.1	59.0
9	370	482.1	77.0	11.6	25.1	21.9	41.4	63.2
10	333	486.1	77.3	11.4	24.3	20.7	43.5	64.3
11	10	435.7	98.6	40.0	10.0	20.0	30.0	50.0
12	1	.	.	.	.	.	.	.
Total	1082	478.5	78.1	12.6	25.4	21.9	40.1	62.0
MIDDLE SCHOOL FORM								
10	8	463.9	87.6	37.5	12.5	12.5	37.5	50.0
11	302	491.9	79.6	13.3	23.8	15.2	47.7	62.9
12	327	493.2	81.5	12.8	23.9	14.4	48.9	63.3
13	362	497.4	83.4	12.2	22.4	15.2	50.3	65.5
14	2	.	.	.	.	.	.	.
15	1	.	.	.	.	.	.	.
Total	1002	494.2	81.6	12.9	23.3	14.9	49.0	63.9
HIGH SCHOOL FORM								
13	3	.	.	.	.	.	.	.
14	3	.	.	.	.	.	.	.
15	332	510.3	89.6	13.3	23.5	12.4	50.9	63.3
16	6	577.2	77.1	0.0	16.7	16.7	66.7	83.3
Total	344	510.9	90.4	13.4	23.6	12.5	50.6	63.1

Note: Performance data has been suppressed for groups of students with N < 6.

Exhibit 30: Performance by Grade Band Form and Student Age – Mathematics

Student Age	N	MEAN SS	SD OF SS	Performance by Achievement Level				
				% Level 1	% Level 2	% Level 3	% Level 4	% Level 3 and Above
ELEMENTARY FORM								
7	2	.	.	.	.	.	.	.
8	366	469.9	75.7	17.5	32.0	29.0	21.6	50.6
9	369	483.3	71.4	12.7	32.0	29.0	26.3	55.3
10	331	489.6	76.9	11.8	28.4	29.9	29.9	59.8
11	11	441.9	67.5	36.4	27.3	18.2	18.2	36.4
12	1	.	.	.	.	.	.	.
Total	1080	480.3	74.9	14.3	30.8	29.3	25.7	54.9
MIDDLE SCHOOL FORM								
10	9	470.2	86.6	33.3	33.3	11.1	22.2	33.3
11	298	491.6	84.1	15.1	30.5	26.2	28.2	54.4
12	329	490.4	82.5	16.4	26.4	27.7	29.5	57.1
13	359	497.2	84.6	15.9	28.1	24.5	31.5	56.0
14	2	.	.	.	.	.	.	.
15	1	.	.	.	.	.	.	.
Total	998	493.0	83.7	15.9	28.5	25.9	29.8	55.6
HIGH SCHOOL FORM								
13	3	.	.	.	.	.	.	.
14	3	.	.	.	.	.	.	.
15	337	496.2	86.4	15.7	30.6	29.4	24.3	53.7
16	6	563.2	62.9	0.0	16.7	16.7	66.7	83.3
Total	349	497.1	87.1	16.1	30.1	28.9	24.9	53.9

Note: Performance data has been suppressed for groups of students with N < 6.

Exhibit 31: Performance by Grade Band Form and Student Age – Science

Student Age	N	MEAN SS	SD OF SS	Performance by Achievement Level				
				% Level 1	% Level 2	% Level 3	% Level 4	% Level 3 and Above
ELEMENTARY FORM								
7	2	.	.	.	.	.	.	.
8	367	467.7	77.8	22.1	18.8	17.7	41.4	59.1
9	369	480.2	73.3	18.7	19.5	17.3	44.4	61.8
10	330	485.3	74.3	17.9	16.4	16.7	49.1	65.8
11	10	433.8	87.0	50.0	10.0	20.0	20.0	40.0
12	1	.	.	.	.	.	.	.
Total	1079	477.1	75.6	19.8	18.2	17.5	44.5	62.0
MIDDLE SCHOOL FORM								
10	8	456.5	66.1	50.0	12.5	25.0	12.5	37.5
11	299	494.2	80.1	23.1	16.1	16.4	44.5	60.9
12	328	492.0	81.1	21.0	20.1	15.6	43.3	58.8
13	360	497.4	84.0	21.7	19.4	13.9	45.0	58.9
14	2	.	.	.	.	.	.	.
15	1	.	.	.	.	.	.	.
Total	998	494.3	81.6	22.1	18.5	15.3	44.0	59.3
HIGH SCHOOL FORM								
13	3	.	.	.	.	.	.	.
14	3	.	.	.	.	.	.	.
15	338	500.4	94.2	24.5	25.2	16.6	33.7	50.3
16	4	.	.	.	.	.	.	.
Total	348	499.9	94.7	25.3	25.0	16.1	33.6	49.7

Note: Performance data has been suppressed for groups of students with N < 6.

Exhibit 32: Performance by Grade Band Form and Student Age – Social Studies

Student Age	N	MEAN SS	SD OF SS	Performance by Achievement Level				
				% Level 1	% Level 2	% Level 3	% Level 4	% Level 3 and Above
ELEMENTARY FORM								
7	2	.	.	.	.	.	.	.
8	365	468.6	82.0	19.2	37.0	30.7	13.2	43.8
9	365	479.6	78.7	18.9	32.3	30.7	18.1	48.8
10	326	484.0	79.9	19.0	28.5	29.1	23.3	52.5
11	10	424.3	112.8	50.0	20.0	10.0	20.0	30.0
12	1	.	.	.	.	.	.	.
Total	1069	476.7	80.8	19.3	32.7	30.1	18.0	48.1
MIDDLE SCHOOL FORM								
10	8	461.4	110.4	37.5	25.0	25.0	12.5	37.5
11	299	491.9	81.3	20.7	25.1	38.8	15.4	54.2
12	326	490.9	83.8	19.3	28.2	31.3	21.2	52.5
13	356	495.9	84.1	18.8	28.4	32.9	19.9	52.8
14	2	.	.	.	.	.	.	.
15	1	.	.	.	.	.	.	.
Total	992	492.8	83.2	19.7	27.3	34.1	19.0	53.0

Note: Performance data has been suppressed for groups of students with N < 6.

Exhibit 33: Elementary Form Demographic Summary – ELA

	N	Mean SS	SD OF SS	Achievement Level	
				% Level 3 and Above	% Below Level 3
STUDENT'S ETHNICITY					
African American	587	479.5	82.6	60.1	39.9
American Indian	4	.	.	.	.
Asian	13	485.2	57.6	53.9	46.1
Hawaiian/Pacific Islander	1	.	.	.	.
Hispanic	35	470.4	70.6	60.0	40.0
White	429	476.8	74.1	64.3	35.7
White/African American	10	502.0	48.4	70.0	30.0
White/American Indian	0	.	.	.	.
White/Asian	1	.	.	.	.
Other	2	.	.	.	.
STUDENT'S GENDER					
Female	360	476.9	83.3	63.1	36.9
Male	722	479.3	75.5	61.5	38.5
ESL (LANGUAGE)					
Pre-functional	14	478.9	36.7	78.6	21.4
Beginner	3	.	.	.	.
Intermediate	2	.	.	.	.
Advanced	2	.	.	.	.
Full English proficient	1	.	.	.	.
Title III exited	1	.	.	.	.
English speaker II	1052	478.5	78.4	61.8	38.2
Pre-functional - Waiver	7	429.7	113.7	57.1	42.9
Beginner - Waiver	0	.	.	.	.
ELIGIBLE FOR FREE OR REDUCED LUNCH					
Free	668	482.1	80.6	63.5	36.5
No	334	470.9	74.2	57.8	42.2
Reduced	80	479.8	71.6	67.5	32.5
PRIMARY DISABILITY					
Moderate Mental Disability	374	470.5	56.9	62.8	37.2
Mild Mental Disability	248	539.9	54.7	90.7	9.3
Autism	201	473.2	58.2	56.7	43.3
Severe Mental Disability	127	376.2	72.4	7.1	92.9
Orthopedically Impaired	45	482.6	75.1	66.7	33.3
Other Health Impaired	40	482.8	97.9	60.0	40.0
Hearing Impaired	12	475.1	74.6	50.0	50.0

Multiple-Disability	9	435.1	87.7	55.6	44.4
Learning Disability	10	561.2	66.0	90.0	10.0
Traumatic Brain Injury	4	.	.	.	.
Speech or Language Impaired	7	559.9	63.6	85.7	14.3
Emotional Disability	4	.	.	.	.
Visually Impaired	1	.	.	.	
TOTAL	1082	478.5	78.1	62.0	38.0

Exhibit 34: Elementary Form Demographic Summary – Mathematics

	N	Mean SS	SD OF SS	Achievement Level	
				% Level 3 and Above	% Below Level 3
STUDENT'S ETHNICITY					
African American	586	482.1	78.1	55.6	44.4
American Indian	4	.	.	.	.
Asian	13	477.7	50.8	61.5	38.5
Hawaiian/Pacific Islander	1	.	.	.	.
Hispanic	36	473.6	63.9	50.0	50.0
White	427	477.0	72.3	53.2	46.8
White/African American	10	509.7	64.8	70.0	30.0
White/American Indian	0	.	.	.	.
White/Asian	1	.	.	.	.
Other	2	.	.	.	.
STUDENT'S GENDER					
Female	359	477.9	80.1	54.3	45.7
Male	721	481.4	72.2	55.2	44.8
ESL (LANGUAGE)					
Pre-functional	14	484.4	46.3	50.0	50.0
Beginner	3	.	.	.	.
Intermediate	2	.	.	.	.
Advanced	2	.	.	.	.
Full English proficient	1	.	.	.	.
Title III exited	1	.	.	.	.
English speaker II	1050	480.3	75.2	54.9	45.1
Pre-functional - Waiver	7	448.6	104.4	42.9	57.1
Beginner - Waiver	0	.	.	.	.
ELIGIBLE FOR FREE OR REDUCED LUNCH					
Free	666	484.8	77.5	57.7	42.3
No	334	471.2	69.2	50.9	49.1
Reduced	80	480.5	73.6	48.8	51.2
PRIMARY DISABILITY					
Moderate Mental Disability	373	470.3	50.2	48.3	51.7
Mild Mental Disability	248	540.7	53.5	89.9	10.1
Autism	200	477.5	55.1	51.5	48.5
Severe Mental Disability	127	381.4	66.0	3.2	96.8
Orthopedically Impaired	45	478.5	72.2	53.3	46.7
Other Health Impaired	40	488.3	93.2	60.0	40.0
Hearing Impaired	12	479.0	64.4	50.0	50.0
Multiple- Disability	9	422.7	97.3	55.6	44.4

Learning Disability	10	576.9	60.4	100.0	0.0
Traumatic Brain Injury	4	.	.	.	.
Speech or Language Impaired	7	554.0	55.6	100.0	0.0
Emotional Disability	4	.	.	.	.
Visually Impaired	1	.	.	.	.
TOTAL	1080	480.3	74.9	54.9	45.1

Exhibit 35: Elementary Form Demographic Summary – Science

	N	Mean SS	SD OF SS	Achievement Level	
				% Level 3 and Above	% Below Level 3
STUDENT'S ETHNICITY					
African American	584	477.3	78.4	62.5	37.5
American Indian	4	.	.	.	.
Asian	13	472.1	60.4	69.2	30.8
Hawaiian/Pacific Islander	1	.	.	.	.
Hispanic	35	466.7	70.8	65.7	34.3
White	429	476.6	73.3	60.1	39.9
White/African American	10	499.7	54.4	70.0	30.0
White/American Indian	0	.	.	.	.
White/Asian	1	.	.	.	.
Other	2	.	.	.	.
STUDENT'S GENDER					
Female	357	473.2	81.5	62.2	37.8
Male	722	479.0	72.4	61.9	38.1
ESL (LANGUAGE)					
Pre-functional	14	486.7	42.3	78.6	21.4
Beginner	3	.	.	.	.
Intermediate	2	.	.	.	.
Advanced	2	.	.	.	.
Full English proficient	1	.	.	.	.
Title III exited	1	.	.	.	.
English speaker II	1049	477.0	75.7	61.7	38.3
Pre-functional - Waiver	7	443.4	121.0	42.9	57.1
Beginner - Waiver	0	.	.	.	.
ELIGIBLE FOR FREE OR REDUCED LUNCH					
Free	665	481.3	77.9	63.9	36.1
No	334	469.1	71.9	59.0	41.0
Reduced	80	475.5	69.1	58.8	41.2
PRIMARY DISABILITY					
Moderate Mental Disability	374	474.0	57.3	62.3	37.7
Mild Mental Disability	247	532.8	44.9	92.7	7.3
Autism	200	472.9	58.2	55.5	44.5
Severe Mental Disability	126	370.2	71.5	5.6	94.4
Orthopedically Impaired	45	480.9	70.1	64.4	35.6
Other Health Impaired	40	478.0	88.0	62.5	37.5
Hearing Impaired	12	469.0	78.8	41.7	58.3
Multiple- Disability	9	437.7	101.0	55.6	44.4

Learning Disability	10	555.1	37.0	100.0	0.0
Traumatic Brain Injury	4	.	.	.	.
Speech or Language Impaired	7	554.7	46.2	100.0	0.0
Emotional Disability	4	.	.	.	.
Visually Impaired	1	.	.	.	.
TOTAL	1079	477.1	75.6	62.0	38.0

Exhibit 36: Elementary Form Demographic Summary – Social Studies

	N	Mean SS	SD OF SS	Achievement Level	
				% Level 3 and Above	% Below Level 3
STUDENT'S ETHNICITY					
African American	579	478.1	81.4	48.5	51.5
American Indian	4	.	.	.	.
Asian	13	471.7	70.8	38.5	61.5
Hawaiian/Pacific Islander	1	.	.	.	.
Hispanic	35	472.5	79.8	51.4	48.6
White	424	474.2	80.6	46.7	53.3
White/African American	10	498.2	98.9	70.0	30.0
White/American Indian	0	.	.	.	.
White/Asian	1	.	.	.	.
Other	2	.	.	.	.
STUDENT'S GENDER					
Female	352	471.3	86.8	47.7	52.3
Male	717	479.4	77.6	48.3	51.7
ESL (LANGUAGE)					
Pre-functional	14	486.7	58.1	50.0	50.0
Beginner	3	.	.	.	.
Intermediate	2	.	.	.	.
Advanced	2	.	.	.	.
Full English proficient	1	.	.	.	.
Title III exited	1	.	.	.	.
English speaker II	1039	476.6	80.6	47.8	52.2
Pre-functional - Waiver	7	445.4	139.5	57.1	42.9
Beginner - Waiver	0	.	.	.	.
ELIGIBLE FOR FREE OR REDUCED LUNCH					
Free	661	480.2	80.5	50.8	49.2
No	329	470.4	82.6	43.8	56.2
Reduced	79	473.9	73.6	43.0	57.0
PRIMARY DISABILITY					
Moderate Mental Disability	372	474.2	60.5	40.3	59.7
Mild Mental Disability	246	535.3	45.7	85.8	14.2
Autism	197	476.7	65.4	39.1	60.9
Severe Mental Disability	124	355.9	72.9	0.8	99.2
Orthopedically Impaired	43	488.7	75.5	55.8	44.2
Other Health Impaired	40	478.7	85.8	55.0	45.0
Hearing Impaired	12	464.3	91.9	41.7	58.3
Multiple- Disability	9	412.8	108.1	22.2	77.8

Learning Disability	10	557.6	51.4	90.0	10.0
Traumatic Brain Injury	4	.	.	.	.
Speech or Language Impaired	7	545.9	39.0	85.7	14.3
Emotional Disability	4	.	.	.	.
Visually Impaired	1	.	.	.	.
TOTAL	1069	476.7	80.8	48.1	51.9

Exhibit 37: Middle School Form Demographic Summary – ELA

	N	Mean SS	SD OF SS	Achievement Level	
				% Level 3 and Above	% Below Level 3
STUDENT'S ETHNICITY					
African American	519	501.5	80.2	67.2	32.8
American Indian	2	.	.	.	.
Asian	6	453.3	99.7	50.0	50.0
Hawaiian/Pacific Islander	0	.	.	.	.
Hispanic	22	468.0	70.4	59.1	40.9
White	439	487.3	82.7	60.4	39.6
White/African American	7	462.1	97.5	57.1	42.9
White/American Indian	1	.	.	.	.
White/Asian	0	.	.	.	.
Other	6	514.2	54.2	66.7	33.3
STUDENT'S GENDER					
Female	343	497.7	82.1	66.8	33.2
Male	659	492.3	81.3	62.4	37.6
ESL (LANGUAGE)					
Pre-functional	13	456.0	85.5	53.9	46.2
Beginner	2	.	.	.	.
Intermediate	1	.	.	.	.
Advanced	0	.	.	.	.
Full English proficient	1	.	.	.	.
Title III exited	0	.	.	.	.
English speaker II	978	495.3	81.1	64.3	35.7
Pre-functional - Waiver	7	392.6	96.1	14.3	85.7
Beginner - Waiver	0	.	.	.	.
ELIGIBLE FOR FREE OR REDUCED LUNCH					
Free	626	498.9	82.3	65.3	34.7
No	287	481.1	80.7	59.2	40.8
Reduced	89	502.7	75.0	68.5	31.5
PRIMARY DISABILITY					
Moderate Mental Disability	438	494.6	56.4	67.1	32.9
Mild Mental Disability	207	561.0	60.8	95.2	4.8
Autism	156	476.1	69.7	54.5	45.5
Severe Mental Disability	105	378.0	71.2	2.9	97.1
Orthopedically Impaired	28	511.2	77.0	64.3	35.7
Other Health Impaired	28	486.6	102.5	57.1	42.9
Hearing Impaired	13	485.4	118.5	61.5	38.5
Multiple- Disability	7	470.4	102.0	57.1	42.9

Learning Disability	6	554.7	58.0	83.3	16.7
Traumatic Brain Injury	4	.	.	.	.
Speech or Language Impaired	4	.	.	.	.
Emotional Disability	6	605.7	53.1	100.00	00
Visually Impaired	0	.	.	.	.
TOTAL	1002	494.2	81.6	63.9	36.1

Exhibit 38: Middle School Form Demographic Summary – Mathematics

	N	Mean SS	SD OF SS	Achievement Level	
				% Level 3 and Above	% Below Level 3
STUDENT'S ETHNICITY					
African American	517	500.1	82.3	60.2	39.8
American Indian	2	.	.	.	.
Asian	6	468.2	112.2	50.0	50.0
Hawaiian/Pacific Islander	0	.	.	.	.
Hispanic	22	470.0	72.4	45.5	54.5
White	437	486.3	85.1	51.0	49.0
White/African American	7	460.6	96.9	57.1	42.9
White/American Indian	1	.	.	.	.
White/Asian	0	.	.	.	.
Other	6	518.5	64.1	50.0	50.0
STUDENT'S GENDER					
Female	342	494.7	81.1	58.5	41.5
Male	656	492.2	85.0	54.1	45.9
ESL (LANGUAGE)					
Pre-functional	15	460.6	86.2	33.3	66.7
Beginner	2	.	.	.	.
Intermediate	1	.	.	.	.
Advanced	0	.	.	.	.
Full English proficient	1	.	.	.	.
Title III exited	0	.	.	.	.
English speaker II	972	494.2	83.2	56.2	43.8
Pre-functional - Waiver	7	388.1	99.3	14.3	85.7
Beginner - Waiver	0	.	.	.	.
ELIGIBLE FOR FREE OR REDUCED LUNCH					
Free	624	499.2	86.7	58.0	42.0
No	286	478.8	78.5	48.6	51.4
Reduced	88	496.1	72.7	61.4	38.6
PRIMARY DISABILITY					
Moderate Mental Disability	440	490.0	57.9	53.2	46.8
Mild Mental Disability	205	563.5	63.6	93.7	6.3
Autism	154	477.1	69.2	46.1	53.9
Severe Mental Disability	103	376.5	69.3	2.9	97.1
Orthopedically Impaired	28	494.9	81.3	50.0	50.0
Other Health Impaired	28	494.1	109.8	53.6	46.4
Hearing Impaired	13	496.5	128.7	61.5	38.5
Multiple- Disability	7	463.7	95.9	42.9	57.1

Learning Disability	6	581.2	83.8	83.3	16.7
Traumatic Brain Injury	4	.	.	.	.
Speech or Language Impaired	4	.	.	.	.
Emotional Disability	6	615.0	47.1	100.0	0.0
Visually Impaired	0	.	.	.	.
TOTAL	998	493.0	83.7	55.6	44.4

Exhibit 39: Middle School Form Demographic Summary – Science

	N	Mean SS	SD OF SS	Achievement Level	
				% Level 3 and Above	% Below Level 3
STUDENT'S ETHNICITY					
African American	517	501.2	80.9	62.3	37.7
American Indian	2	.	.	.	.
Asian	6	461.5	103.3	50.0	50.0
Hawaiian/Pacific Islander	0	.	.	.	.
Hispanic	22	470.3	69.1	40.9	59.1
White	437	487.6	82.8	57.4	42.6
White/African American	7	486.1	70.8	42.9	57.1
White/American Indian	1	.	.	.	.
White/Asian	0	.	.	.	.
Other	6	511.8	63.5	33.3	66.7
STUDENT'S GENDER					
Female	341	494.2	75.8	60.4	39.6
Male	657	494.4	84.5	58.8	41.2
ESL (LANGUAGE)					
Pre-functional	13	457.0	86.8	38.5	61.5
Beginner	2	.	.	.	.
Intermediate	1	.	.	.	.
Advanced	0	.	.	.	.
Full English proficient	1	.	.	.	.
Title III exited	0	.	.	.	.
English speaker II	974	495.5	81.3	60.0	40.0
Pre-functional - Waiver	7	406.7	91.4	14.3	85.7
Beginner - Waiver	0	.	.	.	.
ELIGIBLE FOR FREE OR REDUCED LUNCH					
Free	623	501.1	84.8	61.6	38.4
No	287	479.8	77.7	53.0	47.0
Reduced	88	494.3	64.4	63.6	36.4
PRIMARY DISABILITY					
Moderate Mental Disability	436	497.5	57.5	62.4	37.6
Mild Mental Disability	207	559.9	59.0	93.7	6.3
Autism	155	471.6	67.9	41.3	58.7
Severe Mental Disability	104	371.7	70.7	2.9	97.1
Orthopedically Impaired	28	505.9	65.3	60.7	39.3
Other Health Impaired	28	490.1	91.6	57.1	42.9
Hearing Impaired	13	494.0	99.2	61.5	38.5

Multiple- Disability	7	467.4	104.7	42.9	57.1
Learning Disability	6	582.2	73.7	83.3	16.7
Traumatic Brain Injury	4	.	.	.	.
Speech or Language Impaired	4	.	.	.	.
Emotional Disability	6	598.0	45.1	100.0	0.0
Visually Impaired	0	.	.	.	.
TOTAL	998	494.3	81.6	59.3	40.7

Exhibit 40: Middle School Form Demographic Summary – Social Studies

	N	Mean SS	SD OF SS	Achievement Level	
				% Level 3 and Above	% Below Level 3
STUDENT'S ETHNICITY					
African American	513	501.1	79.2	57.1	42.9
American Indian	2	.	.	.	.
Asian	6	466.3	104.8	33.3	66.7
Hawaiian/Pacific Islander	0	.	.	.	.
Hispanic	22	466.0	71.8	36.4	63.6
White	435	484.3	87.5	49.2	50.8
White/African American	7	480.0	90.3	71.4	28.6
White/American Indian	1	.	.	.	.
White/Asian	0	.	.	.	.
Other	6	520.7	56.4	33.3	66.7
STUDENT'S GENDER					
Female	339	494.5	80.9	54.6	45.4
Male	653	491.9	84.5	52.2	47.8
ESL (LANGUAGE)					
Pre-functional	13	453.2	90.9	23.1	76.9
Beginner	2	.	.	.	.
Intermediate	1	.	.	.	.
Advanced	0	.	.	.	.
Full English proficient	1	.	.	.	.
Title III exited	0	.	.	.	.
English speaker II	968	494.0	82.7	53.6	46.4
Pre-functional - Waiver	7	400.6	98.1	28.6	71.4
Beginner - Waiver	0	.	.	.	.
ELIGIBLE FOR FREE OR REDUCED LUNCH					
Free	619	498.3	83.2	56.9	43.1
No	284	480.3	83.1	45.1	54.9
Reduced	89	494.6	80.8	51.7	48.3
PRIMARY DISABILITY					
Moderate Mental Disability	433	498.0	60.8	51.7	48.3
Mild Mental Disability	206	554.5	52.7	89.8	10.2
Autism	156	477.7	68.1	39.1	60.9
Severe Mental Disability	102	363.5	76.0	2.9	97.1
Orthopedically Impaired	28	503.4	80.7	53.6	46.4
Other Health Impaired	27	480.5	103.3	51.9	48.1
Hearing Impaired	13	484.8	123.1	61.5	38.5
Multiple- Disability	7	453.6	98.5	28.6	71.4

Learning Disability	6	570.7	76.4	83.3	16.7
Traumatic Brain Injury	4	.	.	.	.
Speech or Language Impaired	4	.	.	.	.
Emotional Disability	6	579.7	32.7	100.0	0.0
Visually Impaired	0	.	.	.	.
TOTAL	992	492.8	83.2	53.0	47.0.

Exhibit 41: High School Form Demographic Summary – ELA

	N	Mean SS	SD OF SS	Achievement Level	
				% Level 3 and Above	% Below Level 3
STUDENT'S ETHNICITY					
African American	173	515.5	93.6	64.7	35.3
American Indian	0	.	.	.	.
Asian	2	.	.	.	.
Hawaiian/Pacific Islander	0	.	.	.	.
Hispanic	12	509.7	84.3	58.3	41.7
White	155	505.5	88.3	61.3	38.7
White/African American	0	.	.	.	.
White/American Indian	0	.	.	.	.
White/Asian	1	.	.	.	.
Other	1	.	.	.	.
STUDENT'S GENDER					
Female	122	511.4	91.5	64.8	35.2
Male	222	510.7	90.0	62.2	37.8
ESL (LANGUAGE)					
Pre-functional	3	.	.	.	.
Beginner	0	.	.	.	.
Intermediate	0	.	.	.	.
Advanced	0	.	.	.	.
Full English Proficient	1	.	.	.	.
Title III exited	0	.	.	.	.
English speaker II	339	510.6	90.2	63.4	36.6
Pre-functional - Waiver	0	.	.	.	.
Beginner - Waiver	1	.	.	.	.
ELIGIBLE FOR FREE OR REDUCED LUNCH					
Free	200	521.3	93.4	67.0	33.0
No	111	494.5	84.7	55.0	45.0
Reduced	33	503.6	83.6	66.7	33.3
PRIMARY DISABILITY					
Moderate Mental Disability	162	500.2	69.5	62.4	37.6
Mild Mental Disability	81	581.1	71.4	92.6	7.4
Autism	43	500.6	79.7	51.2	48.8
Severe Mental Disability	33	387.4	65.1	3.0	97.0
Orthopedically Impaired	8	549.1	78.0	75.0	25.0
Other Health Impaired	8	509.8	122.2	62.5	37.5
Hearing Impaired	1	.	.	.	.
Multiple- Disability	1	.	.	.	.

Learning Disability	0	.	.	.	.
Traumatic Brain Injury	5	.	.	.	.
Speech or Language Impaired	1	.	.	.	.
Emotionally Disability	1	.	.	.	.
Visual Impaired	0	.	.	.	
TOTAL	344	510.9	90.4	63.1	36.9

Exhibit 42: High School Form Demographic Summary – Mathematics

	N	Mean SS	SD OF SS	Achievement Level	
				% Level 3 and Above	% Below Level 3
STUDENT'S ETHNICITY					
African American	175	501.9	94.4	54.9	45.1
American Indian	0	.	.	.	.
Asian	2	.	.	.	.
Hawaiian/Pacific Islander	0	.	.	.	.
Hispanic	13	489.7	50.9	46.2	53.8
White	157	492.2	82.0	52.9	47.1
White/African American	0	.	.	.	.
White/American Indian	0	.	.	.	.
White/Asian	1	.	.	.	.
Other	1	.	.	.	.
STUDENT'S GENDER					
Female	123	494.8	93.9	54.5	45.5
Male	226	498.3	83.4	53.5	46.5
ESL (LANGUAGE)					
Pre-functional	3	.	.	.	.
Beginner	0	.	.	.	.
Intermediate	0	.	.	.	.
Advanced	0	.	.	.	.
Full English proficient	1	.	.	.	.
Title III exited	0	.	.	.	.
English speaker II	344	497.0	87.5	54.4	45.6
Pre-functional - Waiver	0	.	.	.	.
Beginner - Waiver	1	.	.	.	.
ELIGIBLE FOR FREE OR REDUCED LUNCH					
Free	201	505.0	90.0	57.7	42.3
No	115	483.4	79.8	47.8	52.2
Reduced	33	496.8	89.7	51.5	48.5
PRIMARY DISABILITY					
Moderate Mental Disability	162	484.5	63.7	48.2	51.8
Mild Mental Disability	84	563.3	72.7	83.3	16.7
Autism	45	490.9	62.6	55.6	44.4
Severe Mental Disability	33	374.5	74.2	0.0	100.0
Orthopedically Impaired	8	514.1	88.3	75.0	25.0
Other Health Impaired	8	519.8	110.9	37.5	62.5
Hearing Impaired	1	.	.	.	.
Multiple- Disability	1	.	.	.	.

Learning Disability	0	.	.	.	.
Traumatic Brain Injury	5	.	.	.	.
Speech or Language Impaired	1	.	.	.	.
Emotional Disability	1	.	.	.	.
Visually Impaired	0	.	.	.	.
TOTAL	349	497.1	87.1	53.9	46.1

Exhibit 43: High School Form Demographic Summary – Science

	N	Mean SS	SD OF SS	Achievement Level	
				% Level 3 and Above	% Below Level 3
STUDENT'S ETHNICITY					
African American	174	504.5	100.4	54.0	46.0
American Indian	0	.	.	.	.
Asian	2	.	.	.	.
Hawaiian/Pacific Islander	0	.	.	.	.
Hispanic	13	486.7	90.8	23.1	76.9
White	157	495.3	89.6	46.5	53.5
White/African American	0	.	.	.	.
White/American Indian	0	.	.	.	.
White/Asian	1	.	.	.	.
Other	1	.	.	.	.
STUDENT'S GENDER					
Female	125	497.8	93.1	49.6	50.4
Male	223	501.1	95.7	49.8	50.2
ESL (LANGUAGE)					
Pre-functional	3	.	.	.	.
Beginner	0	.	.	.	.
Intermediate	0	.	.	.	.
Advanced	0	.	.	.	.
Full English proficient	1	.	.	.	.
Title III exited	0	.	.	.	.
English speaker II	343	499.7	95.2	50.2	49.8
Pre-functional - Waiver	0	.	.	.	.
Beginner - Waiver	1	.	.	.	.
ELIGIBLE FOR FREE OR REDUCED LUNCH					
Free	200	508.9	95.9	55.0	45.0
No	115	482.9	88.6	39.1	60.9
Reduced	33	504.5	102.3	54.6	45.4
PRIMARY DISABILITY					
Moderate Mental Disability	161	493.5	74.6	45.3	54.7
Mild Mental Disability	83	563.4	70.2	81.9	18.1
Autism	45	492.9	68.3	35.6	64.4
Severe Mental Disability	34	361.3	77.3	0.0	100.0
Orthopedically Impaired	8	530.1	92.5	75.0	25.0
Other Health Impaired	8	508.3	117.2	50.0	50.0
Hearing Impaired	1	.	.	.	.

Multiple- Disability	1	.	.	.	.
Learning Disability	0	.	.	.	.
Traumatic Brain Injury	5	.	.	.	.
Speech or Language Impaired	1	.	.	.	.
Emotional Disability	1	.	.	.	.
Visually Impaired	0	.	.	.	.
TOTAL	348	499.9	94.7	49.7	50.3

Chapter 8: Validity

Content Validity

One source of evidence for the content validity of the South Carolina Alternate Assessment was obtained through independent alignment studies. The University of North Carolina at Charlotte (UNCC) conducted studies of the alignment of (a) ASMGs to grade-level curriculum standards and (b) SC-Alt items to the ASMGs that they targeted. This was a pilot study conducted by Flowers, Browder, Wakeman, and Karvonen with UNCC through the National Alternate Assessment Center (NAAC). South Carolina is a member state of the NAAC. The second independent study was completed by the South Carolina Education Oversight Committee (EOC) as required by the state Education Accountability Act of 1998 (EAA). The EOC approved the ELA and mathematics content areas on February 28, 2008. The EOC is currently conducting the independent science alignment study. Copies of these reports are available in entirety from the SCDE. Some excerpts and comments are presented below.

The UNCC alignment-study results for the English language arts and mathematics assessments are reported in detail in Flowers, Browder, Wakeman, and Karvonen (2006a). The results of the alignment studies for the English language arts (ELA) and mathematics assessment indicate that:

> The state has evidence supporting alignment for its measurement guidelines and alternate assessment based on all seven criteria. We conclude that overall this is an alternate assessment system that links to the grade level content. Some areas for consideration in further development of the system are noted related to balance of content. (p. 7)

The alignment study results for the science assessment are reported in detail in Flowers, Browder, Wakeman, and Karvonen (2006b) and in an addendum dated December 21, 2007. The results of the alignment study for the science assessment indicate that:

> The strength of the South Carolina science Alternate Assessment was that nearly all of the content was academic science content (98%). This is especially notable given that the alternate assessment tasks included items accessible to students at all symbolic levels. In contrast, the degree of alignment of AA tasks/items to grade-level standards was lower than those found in the alignment of ELA and mathematics. This difference could be due to the fact that the state's science grade-level standards changed during the development of the science AA. Another challenge was that the state had linked its alternate assessment tasks to the state standards and not directly to the measurement guidelines, creating a tough challenge to demonstrating alignment….Our work with other states suggests that science may typically be the area rated as having the weakest alignment. (p. 4).

SCDE reviewed the initial science alignment study and determined that one source of some mis-alignment had resulted from the linking of some items to multiple standards and indicators in the alignment document provided by SCDE. During the Science Content Review Committee meeting, some members recommended adding additional indicators to align to some items. The intent of these recommendations focused more on instruction and demonstrating that

instruction could include multiple standards and indicators. However, the alignment study team only considered the first two standards aligned to each item. In some cases, the first two standards were not necessarily the most appropriate. SCDE prioritized the standards and indicators and resubmitted the documentation for an additional study. From this review, completed December 21, 2007 (Flowers, Browder, Wakeman, and Karvonen, 2007), 163 of 173 items were rated as academic. Of the 10 items listed as nonacademic, 6 were rated as foundational (p.1). SCDE is currently addressing the items that were rated as having no content centrality in order to make a recommendation regarding resolution of these issues.

At the time of the alignment study for ELA and mathematics by Dr. Browder and colleagues, the design of the SC-Alt was envisioned as a single assessment across grade levels. This design changed to a grade-band assessment following the study, however, the information provided from the alignment study was used to identify items with alignment difficulty and these items were omitted from the operational grade-band test forms. Information from the review along with teacher comments was also used during item data review as part of the decision making process regarding inclusion of items in the assessment.

A content coverage analysis based on the starting point for each form and content area is provided in appendix I. In preparation for new development, a comprehensive review of the content coverage analyses and the results of the alignment studies will be conducted to assure that balance of content and any other deficiencies are addressed with new development.

Convergent and Discriminant Validity

According to Critical Element 4.1(e) of the federal peer review and Standard 1.14 of the Standards for Educational and Psychological Testing, it is desirable, if not necessary, to provide evidence of convergent and discriminant validity. One common method for examining this aspect of validity is with a multitrait-multimethod matrix (MTMM) (Campbell & Fiske, 1959).

Campbell and Fiske (1959) proposed the MTMM matrix design as a tool for the study of convergent and discriminant validity in psychological measurement. The MTMM matrix employs a crossed factorial measurement design of traits and methods to reveal these types of validity in comparison:

- Large correlations on validity diagonals (i.e., same trait and different methods) indicate convergent validity.
- Low correlations in the heterotrait-monomethod blocks indicate discriminant validity and the absence of method effects.
- Low correlations in the heterotrait-heteromethod blocks also indicate discriminant validity.

Selection of Traits and Methods

The student's abilities in each of the subjects, ELA, mathematics, science, and social studies, make up the four traits for the MTMM study. Two methods are considered for assessing these traits: the Student Placement Questionnaire (SPQ) as a structured teacher rating of student ability and the SC-Alt scale score as an IRT score of the student's responses to the set of presented test items. In other words, the two methods contrast test scores of student performance

with expert (or teacher) ratings. With four traits and two methods, the MTMM correlation matrix is of order 8. Note that the grade 10 assessment did not include social studies component; therefore, the MTMM matrix for grade 10 has only six rows and columns.

Results

MTMM matrices were computed separately for each grade band. The results are given in Exhibit 44 through Exhibit 46**.** Pearson correlations are used, with pairwise deletion of missing data. For each matrix the minimum pairwise sample size is indicated. *P*-values of individual correlation coefficients are not reported, since *all* correlations are highly significant ($P < 0.0001$).

Exhibit 44: MTMM Matrix, Scale Scores with SPQ Scores, Grades 3–5

	IRT Scale Scores				**SPQ Scores**			
	ELA	Math	Science	Social Studies	ELA	Math	Science	Social Studies
ELA_Scale	1.00							
Math_Scale	*0.89*	1.00						
Science_Scale	*0.89*	*0.90*	1.00					
Social_Scale	*0.89*	*0.87*	*0.91*	1.00				
ELA_SPQ	**0.71**	0.72	0.72	0.73	1.00			
Math_SPQ	0.69	**0.73**	0.70	0.72	*0.85*	1.00		
Science_SPQ	0.66	0.68	**0.67**	0.68	*0.81*	*0.84*	1.00	
Social_SPQ	0.73	0.75	0.74	**0.77**	*0.83*	*0.85*	*0.87*	1.00
Minimum pairwise N: 974								

Exhibit 45: MTMM Matrix, Scale Scores and SPQ Scores, Grades 6–8

	IRT Scale Scores				SPQ Scores			
	ELA	Math	Science	Social Studies	ELA	Math	Science	Social Studies
ELA_Scale	1.00							
Math_Scale	*0.89*	1.00						
Science_Scale	*0.88*	*0.90*	1.00					
Social_Scale	*0.88*	*0.88*	*0.91*	1.00				
ELA_SPQ	**0.76**	0.75	0.73	0.75	1.00			
Math_SPQ	0.74	**0.76**	0.72	0.73	*0.86*	1.00		
Science_SPQ	0.73	0.75	**0.72**	0.72	*0.84*	*0.86*	1.00	
Social_SPQ	0.78	0.78	0.78	**0.79**	*0.86*	*0.86*	*0.89*	1.00
Minimum pairwise N: 919								

Exhibit 46: MTMM Matrix, Scales Scores and SPQ Scores, Grade 10

	IRT Scale Scores			SPQ Scores		
	ELA	Math	Science	ELA	Math	Science
ELA_Scale	1.00					
Math_Scale	*0.90*	1.00				
Science_Scale	*0.87*	*0.87*	1.00			
ELA_SPQ	**0.78**	0.75	0.72	1.00		
Math_SPQ	0.78	**0.76**	0.73	*0.90*	1.00	
Science_SPQ	0.73	0.70	**0.67**	*0.83*	*0.88*	1.00
Minimum pairwise N: 330						

In each MTMM table, the convergent validity coefficients (correlations between measurements of the same trait using different methods) are marked in bold. These convergent validity coefficients range from 0.67 to 0.79 and certainly fall into an acceptable range. These high correlations indicate good validity for the SPQ. The above three Exhibits indicate that the SPQ and the actual test are essentially measuring the same trait and that the SPQ is a good indicator of performance on the test.

The entries in the monomethod triangles (correlations between measurements of different traits using the same method) are set in italics. These correlations coefficients range between 0.88 to 0.91 for IRT scale scores and between 0.81 to 0.90 for SPQ scores. These high correlations indicate the presence of method variance. However, this is to be expected because the SPQ was not developed to measure the trait; instead, it indicates only the starting task on the test for measuring the trait. Such a result of high correlations in the monomethod triangles is not uncommon in MTMM studies (Fiske, 1995). Specific conditions offer themselves as causes for the present scenario. First, the different scale types—number-correct rating scales versus IRT

scales of behavioral tests—are in themselves a source of method variation. Second, the SPQ's "can do" questions draw on the teacher's memory of a student's possible performance over the long term and are apt to differ in quality and veracity. Third, the IRT scale scores for the three subjects reflect the student's performance in the testing situation and are subject to the student's form on the testing day.

The heterotrait-heteromethod correlations appear in the tables in regular type. These correlation coefficients fall into the same range as the convergent validity coefficients, with values from 0.66 to 0.78. To confirm discriminant validation, the heterotrait-heteromethod correlations should be smaller than the convergent validity coefficients. Instead, these MTMM matrices support the notion that that the three traits vary essentially on just a single dimension. Because the population of alternate assessment students is so *very* heterogeneous, the students' general level of cognitive functioning dominates the relationship among their scale scores.

Validity of the Student Placement Questionnaire (SPQ)

AIR analyzed information from the 2007 administration regarding the agreement between SPQ recommended start points and the final observed start points as determined by a review of the 2007 item data. The purpose of the study was to determine the effectiveness of the SPQ in identifying the most appropriate starting task.

Administration of the SC-Alt uses the SPQ as a pre-assessment instrument to determine the most appropriate starting point in the assessment. The SPQ requires the teacher to evaluate the student on 12 to 15 "can do" statements addressing the student's skills and knowledge in each content area on the basis of the teacher's prior instructional knowledge of the student. A total score computed from the teacher's SPQ responses indicates the initial starting task for the assessment.

The instructions for using the SPQ include procedures requiring teachers to adjust the starting point below the SPQ recommended start point when the student is not successful on the first administered task. Alternately, after reviewing the assessment, some teachers may have judged that a student needed to start at a higher level than recommended by the SPQ. This result occurred almost exclusively when the SPQ recommended starting point was Task 1.

A summary of the results of the agreement between the SPQ recommended start points and the observed start points for each content area and grade-band form is presented in Exhibit 47. In general the results of the 2007 study show that the SPQ worked well in targeting starting tasks, resulting in an overall agreement between the SPQ recommended start point and the observed start point for 91% of the test administrations.

Exhibit 47: Agreement Between SPQ and Observed Start Points

Subject	Grade Band	SPQ Recommended Starting Task	Administrations Consistent with SPQ	Administrations Inconsistent with SPQ (Below Recommended)	Administrations Inconsistent with SPQ (Above Recommended)	Percent Inconsistent with SPQ
ELA	3-5	1	387	0	49	11.24%
		3	243	21	8	10.66%
		6	354	15	0	4.07%
		Total	984	36	57	8.64%
	6-8	1	271	0	36	11.73%
		3	174	17	1	9.38%
		6	474	20	1	4.24%
		Total	919	37	38	7.55%
	10	1	82	0	10	10.87%
		3	56	6	0	9.68%
		6	169	15	1	8.65%
		Total	307	21	11	9.44%
	ELA Total		2210	94	106	9.05%
Math	3-5	1	366	0	57	13.48%
		3	283	22	2	7.82%
		6	321	14	1	4.46%
		Total	970	36	60	9.01%
	6-8	1	259	0	29	10.07%
		3	211	19	7	10.97%
		6	453	8	1	1.95%
		Total	923	27	37	6.48%
	10	1	79	0	15	15.96%
		3	75	6	0	7.41%
		6	150	18	0	10.71%
		Total	304	24	15	11.37%
	Math Total		2197	87	112	9.06%

Subject	Grade Band	SPQ Recommended Starting Task	Administrations Consistent with SPQ	Administrations Inconsistent with SPQ (Below Recommended)	Administrations Inconsistent with SPQ (Above Recommended)	Percent Inconsistent with SPQ
Science	**3-5**	1	470	0	57	10.82%
		3	253	10	5	5.60%
		6	242	26	0	9.70%
		Total	965	36	62	9.22%
	6-8	1	312	0	27	7.96%
		3	206	15	5	8.85%
		6	411	14	0	3.29%
		Total	929	29	32	6.16%
	10	1	107	0	18	14.40%
		3	58	8	0	12.12%
		6	140	10	1	7.28%
		Total	305	18	19	10.82%
	Science Total		2199	83	113	8.91%
Social Studies	**3-5**	1	328	0	66	16.75%
		5	268	22	5	9.15%
		11	320	45	1	12.57%
		Total	916	67	72	13.18%
	6-8	1	217	0	46	17.49%
		5	185	23	2	11.90%
		11	466	39	0	7.72%
		Total	868	62	48	11.25%
	Social Studies Total		1784	129	120	13.96%
Grand Total			8390	393	451	9.14%

The purpose of the SPQ was to help teachers determine the starting task for the assessment. The data above indicate that the SPQ worked very well and in the vast majority of cases the teachers agreed with the starting task indicated by the SPQ.

Engagement Item Scores and Their Relationship to Proficiency Levels

One beginning item in each of the first three to five tasks in an academic content area of the SC-Alt assessment is an engagement item. Each of the engagement items is aligned with the academic content standards through the ASMGs at the lowest complexity or prerequisite skill level. These items were designed to assess students at the very lowest functioning or pre-symbolic level. Students who respond to and receive credit only on the engagement items would be expected to receive achievement proficiency scores placing them in the very lowest performance level (Achievement Level 1). Alternately, as shown below, no students who only receive credit for engagement items across tasks can reach the "proficient" level on the scale (Achievement Level 3 or 4).

This section investigates whether the method of calculating student scale scores by maximum likelihood IRT will produce results that are compliant with this intended performance classification. In other words, the question is whether scale scores based on high performance on *only* the engagement items will fall below or into the proficiency range (i.e., Achievement Level 3 or 4).

The issue of the performance classification of "engagement only" responses was addressed by simulation. For each combination of subject and grade band form, it was determined how the scoring method would classify response patterns with maximal scores on the engagement items and minimal scores on all others.

Simulation

For each grade-band and subject combination, response patterns were simulated according to these conditions:

1) Response patterns were generated for low-complexity and moderate-complexity starting points, since only the first three to five tasks in a content area form contain an engagement item. For the two starting points, the simulated response strings corresponded to all the items that would be minimally presented to a student:
    a. Low: Tasks 1-5 (ELA/Mathematics/Science);
       Tasks 1-7 (Social Studies);
    b. Moderate: Tasks 3-9 (ELA/Mathematics/Science);
       Tasks 5-12 (Social Studies);
2) The simulated response patterns showed maximum score points for engagement items and zero scores (i.e., no credit) for all other presented items.
3) Access limitation items were treated as not-presented and thereby excluded from ability estimation. This treatment of access limitation items produces higher scale scores than if these items were scored zero.

Results

For the simulated 22 "engagement only" response patterns (ELA/Math/Science x 3 grade-bands and Social Studies x 2 grade-bands; times 2 starting points), performance values were calculated by the method described in Chapter 5. The resulting estimates for ability (theta), Scale Score, and Performance Level are shown in Exhibit 48.

Across subjects, grade-bands, and starting points, all simulated "engagement only" response patterns resulted in performance classified as Achievement Level 1. These results show that, under the administration conditions for the Spring 2007 SC-Alt, it was not possible for a student to achieve proficiency – Achievement Level 3 – by responding to engagement items only.

Exhibit 48: Performance Results for Cases Simulated as Responding to Engagement Items, by Subject, Grade, and Starting Point

		Start: Low			Start: Moderate		
Subject	Grade Band	theta	Scale	Achievement Level	theta	Scale	Achievement Level
ELA	3-5	-1.66	379	**1**	-2.09	358	**1**
	6-8	-1.69	377	**1**	-2.51	338	**1**
	9-12	-1.07	407	**1**	-2.14	356	**1**
Math	3-5	-1.36	409	**1**	-2.11	375	**1**
	6-8	-1.36	409	**1**	-2.09	376	**1**
	9-12	-1.33	410	**1**	-1.95	382	**1**
Science	3-5	-1.05	411	**1**	-1.80	371	**1**
	6-8	-1.08	409	**1**	-1.51	386	**1**
	9-12	-1.43	390	**1**	-2.34	342	**1**
Social	3-5	-1.34	397	**1**	-2.32	344	**1**
	6-8	-1.32	398	**1**	-2.50	334	**1**

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Appendices

Appendix A: Assignment of Tasks to Grade-Band Forms for the Spring 2007 Administration

All tasks in each SC-Alt grade-band assessment align with Assessment Standards and Measurement Guidelines (ASMGs) in that grade band. Because adjacent grade-band score scales are linked psychometrically, some tasks in each grade-band assessment align with ASMGs in both adjacent grade bands. In turn, these separate grade-band ASMGs link to separate grade-level performance standards for the appropriate grades.

All items in linking tasks are developed to be appropriate for students in both adjacent grade bands. In some cases (e.g., some tasks in ELA), the ASMGs to which linking tasks align are equivalent for two adjacent grade bands. However, the grade-level performance standards to which the ASMGs are linked *do* differ across the adjacent grade bands. In all content areas and for all grade bands, Descriptions of Achievement Levels (DALs) are specific to each grade band and differ across grade bands.

2007 Operational Field Test Designs to Support Psychometric Linking of Grade-Band Score Scales

To provide data to link all grade-band assessments onto a vertical scale, linking tasks were repeated in adjacent grade assessments. For example, 5 of the tasks that appeared in the ELA grades 3–5 assessment also appeared in the ELA grades 6–8 assessment. Those 5 linking tasks and the 7 unique tasks made up the 12 tasks in the ELA grades 3–5 assessment. The ELA grades 6–8 assessment included the 5 linking tasks from the 3–5 assessment, 5 linking tasks that also appeared in the grades 9–12 assessment, and 2 unique tasks. This "linking upward" design ensures that students were assessed on ASMGs aligned with their current grade placement or previous grades.

English Language Arts Assessment

The ELA assessment covered ASMGs in reading, writing, and communication. The design included 12 tasks per each of three grade-band assessments and required the development of a total of 26 tasks. The design for the ELA assessment for spring 2007 appears in Exhibit 49.

Exhibit 49: Numbers of Tasks in Each Operational Grade-Band Assessment, ELA

Grade Band	Unique Tasks	Linking Tasks		Total for Operational Test
	Tasks in Each Grade-Band Assessment Test Booklet			
10	7	5	—	12
6–8	2		5	12
3–5	7	—		12
	Tasks to Be Included			
All grades	16	10		26

Mathematics Assessment

The mathematics assessment covered the mathematics ASMGs. The design included 12 tasks per each of three grade-band assessments and required the development of a total of 22 tasks. The design for the mathematics assessment for spring 2007 appears in Exhibit 50.

Exhibit 50: Numbers of Tasks in Each Operational Grade Band Assessment, Mathematics

<table>
<tr><th>Grade Band</th><th>Unique Tasks</th><th colspan="3">Linking Tasks</th><th>Total for Operational Test</th></tr>
<tr><td></td><td colspan="5">Tasks in Each Grade-Band Assessment Test Booklet</td></tr>
<tr><td>10</td><td>6</td><td rowspan="2">2</td><td>—</td><td rowspan="3">4</td><td>12</td></tr>
<tr><td>6–8</td><td>2</td><td rowspan="2">4</td><td>12</td></tr>
<tr><td>3–5</td><td>4</td><td>—</td><td>12</td></tr>
<tr><td></td><td></td><td colspan="3"></td><td></td></tr>
<tr><td></td><td colspan="5">Tasks to Be Included</td></tr>
<tr><td>All grades</td><td>12</td><td colspan="3">10</td><td>22</td></tr>
</table>

Science Assessment

The science assessment covered the science ASMGs. The design included 12 tasks per each of three grade-band assessments and required the development of a total of 27 tasks. The design for the science assessment for spring 2007 appears in Exhibit 51.

Exhibit 51: Numbers of Tasks in Each Operational Grade-Band Assessment, Science

<table>
<tr><th>Grade Band</th><th>Unique Tasks</th><th colspan="2">Linking Tasks</th><th>Total for Operational Test</th></tr>
<tr><td></td><td colspan="4">Tasks in Each Grade-Band Assessment Test Booklet</td></tr>
<tr><td>10</td><td>8</td><td rowspan="2">4</td><td>—</td><td>12</td></tr>
<tr><td>6–8</td><td>3</td><td rowspan="2">5</td><td>12</td></tr>
<tr><td>3–5</td><td>7</td><td>—</td><td>12</td></tr>
<tr><td></td><td></td><td colspan="2"></td><td></td></tr>
<tr><td></td><td colspan="4">Tasks to Be Included</td></tr>
<tr><td>All grades</td><td>18</td><td colspan="2">9</td><td>27</td></tr>
</table>

Appendix B: Starting and Stopping Rules for Using the Student Placement Questionnaire

The South Carolina Alternate Assessment: SC-Alt Spring 2007 Directions for Determining the Starting and Concluding Tasks

These directions guide you through

- completing the Student Placement Questionnaire (SPQ);
- identifying the starting task in each content area;
- administering and adjusting the starting task, if that becomes necessary; and
- concluding the administration of tasks.

Completing the Student Placement Questionnaire

The Student Placement Questionnaire (SPQ) is designed to identify the most appropriate starting task for each of your students in each content area of the SC-Alt. You will use the SPQ to identify the most appropriate starting task for each student in the SC-Alt assessments in English language arts, mathematics, science, and social studies. Answer each SPQ item as accurately as you can, using your experience in the classroom with this student.

The SPQs are located in the student Answer Folder along with the areas for recording the student's scores on each SC-Alt task. **An example of a completed English language arts SPQ is included at the end of these instructions.**

Identifying the Starting Task for a Student in Each Content Area

Bubble in your responses to the SPQ questions.

After you respond to all items in the SPQ, identify the most appropriate starting task for this student following the steps on the SPQ. These are the steps:

1. Count the number of bubbles you marked in each of the first three columns and write the totals in the blocks under each column.

2. In section 3 at the bottom of the page:

    a. Write the column totals in the appropriate blocks.

    b. Multiply each total by the specified multiplier and write the resulting totals in the blocks to the right.

    c. Sum the three totals to obtain the total SPQ score. Write the SPQ score into the blocks and bubble in the SPQ score.

    Please check your work and complete the bubble grids for the total SPQ score.

3. Find the total SPQ score in section 4 to determine the starting task for this student.

Administering the Starting Task and Concluding the Administration

After you identify the most appropriate starting task for this student, follow these directions to administer the starting task and conclude the administration.

These are the starting and concluding tasks. Please note that the starting and concluding tasks are different for social studies because the social studies assessment is being field-tested.

ELA, Mathematics, and Science	
Starting task	**Administer all items in at least these tasks**
Task 1	1–5
Task 3	3–9
Task 6	6–12

Social Studies	
Starting task	**Administer all items in at least these tasks**
Task 1	1–7
Task 5	5–12
Task 11	11–19

If the student responds successfully* on the concluding task (task 5 or 9 in ELA, mathematics, and science; task 7 or 12 in social studies), continue to the next task until the student can no longer respond successfully, following the guidelines below.

***Responding Successfully on the Concluding Task**
"Responding successfully" means getting at least 3 total points on a task. When the student gets at least 3 total points on a concluding task, continue to the next task, following the directions below.

Examples of responding successfully and unsuccessfully on the concluding task:

- In a task with five items, students who get 1 point on three of the five items (or 3 points on one item) are responding successfully and should attempt the next task.
- In a task with five items, students who get 1 point on only two of five items (or 2 points on one item) are responding unsuccessfully. You should conclude the administration for these students.

(Please note that these directions apply only to concluding tasks. Students should attempt all tasks as described in the table above.)

ELA, Mathematics, and Science

Students Who Start at Task 1:
Administer all items in tasks 1 through 5

- If the student responds successfully on task 5, administer all items in task 6
    - If the student does not respond successfully on task 6, conclude the administration

- If the student responds successfully on task 6, administer all items in task 7
    - If the student does not respond successfully on task 7, conclude the administration
- If the student responds successfully on task 7, administer all items in task 8
- Continue until the student can no longer respond successfully

Students Who Start at Task 3:
Administer all items in tasks 3 through 9

- If the student responds successfully on task 9, administer all items in task 10
    - If the student does not respond successfully on task 10, conclude the administration
- If the student responds successfully on task 10, administer all items in task 11
    - If the student does not respond successfully on task 11, conclude the administration
- If the student responds successfully on task 11, administer all items in task 12

Students Who Start at Task 6:
Administer all items in tasks 6 through 12

Social Studies

Students Who Start at Task 1:
Administer all items in tasks 1 through 7

- If the student responds successfully on task 7, administer all items in task 8
    - If the student does not respond successfully on task 7, conclude the administration
- If the student responds successfully on task 8, administer all items in task 9
    - If the student does not respond successfully on task 8, conclude the administration
- If the student responds successfully on task 9, administer all items in task 10
- Continue until the student can no longer respond successfully

Students Who Start at Task 5:
Administer all items in tasks 5 through 12

- If the student responds successfully on task 12, administer all items in task 13
    - If the student does not respond successfully on task 12, conclude the administration
- If the student responds successfully on task 13, administer all items in task 14
    - If the student does not respond successfully on task 13, conclude the administration
- If the student responds successfully on task 14, administer all items in task 15
    - If the student does not respond successfully on task 15, conclude the administration
- Continue until the student can no longer respond successfully

Students Who Start at Task 11:
Administer all items in tasks 11 through 19

Special Circumstances

The Starting Task Is Probably Too Difficult: ELA, Mathematics, and Science
When a student starts at task 3 or 6 and is unable to respond successfully on that task (using the definition from above), do not continue to the subsequent task. Instead, restart the student at the next lower starting task and continue the administration according to the requirements and guidelines above. For example:

- If the student starts at task 3 but cannot respond successfully on task 3, restart the student at task 1 and continue the administration according to the rules and guidelines above.
- If the student starts at task 6 but cannot respond successfully on task 6, restart the student at task 3 and continue the administration according to the requirements and guidelines above.

The Starting Task Is Probably Too Difficult: Social Studies
When a student starts at task 5 or 11 and is unable to respond successfully on that task (using the definition from above), do not continue to the subsequent task. Instead, restart the student at the next lower starting task and continue the administration according to the requirements and guidelines above. For example:

- If the student starts at task 5 but cannot respond successfully on task 5, restart the student at task 1 and continue the administration according to the rules and guidelines above.
- If the student starts at task 11 but cannot respond successfully on task 11, restart the student at task 5 and continue the administration according to the requirements and guidelines above.

Appendix C: Plan for Using Scoring Audits and Analysis of Video-Rater Data from the Spring 2007 Operational Administration

This appendix presents the plan and results of a videotaping study to audit scoring accuracy for the spring 2007 administrations of the SC-Alt in ELA, mathematics, science, and social studies. **Scoring accuracy** refers to the degree to which teachers follow scaffolding and scoring directions correctly and assign correct scores to student responses.

Sampling Procedures

The unit of analysis for this audit was each grade-band assessment in each content area. The sampling of districts, schools, teachers, and students that were videotaped for the study was as diverse as possible so that the final sample of teachers and students would be as broadly representative of the range of student and test administration situations as possible. The sampling frame and procedures were designed to yield videotapes of 60 teachers per grade band as they administer the SC-Alt in all four content areas to a single student.

A sample of students was identified for videotaping such that (a) all districts implementing the SC-Alt would be required to videotape at least one student administration (all content areas) and (b) the total number of taped administrations per district would be based on the number of teachers involved in the assessment for each district. The sampling was by teacher within districts, with adjustments made as needed to ensure an acceptable representation of students in the sample by grade-band form level and primary disability. Each teacher included in the sample was required to videotape only one student. Based on the number of students assessed during the spring of 2006, a total of 180 teachers (and students) would be sampled by selecting approximately 33% of the teachers overall. The number of teachers (and students) selected from each district was based on the following scale:

Total Number of Teachers per District	Number Required to Video
1–5	1
6–8	2
9–11	3
12–14	4
15–17	5
18–20	6
21–23	7
24–26	8
27–29	9
30–32	10
33–35	11
36–38	12
39–41	13
42–44	14

Based on this scale and the 2006 alternate assessment numbers, the largest number of teachers (students) per district that would have to be taped would be 13 each from the Charleston and Greenville school districts.

A stratified sampling procedure was used to obtain approximately 60 students and teachers per each of the elementary, middle, and high school levels, and to obtain approximately equal numbers of students for each of the four largest primary disability groups (Severe Mental Disability, Moderate Mental Disability, Mild Mental Disability, and Autism) for each grade-span form. These four disability groups constitute approximately 90% of the students expected to be assessed, and the disability categories represent the full range of students with cognitive disabilities from those functioning at the lowest level to those functioning at the highest level. Since the severe mental disability and the autism groups of students were expected to be the most difficult to assess, these groups were over sampled to obtain reasonable representation of these students at each grade-span level.

The sampling of students and teachers was conducted from the January 2007 precode file, which was the pre-identification file for the spring 2007 SC-Alt administration. The sampling was conducted by SCDE and the students identified for videotaping were flagged on the precode file sent to Measurement Incorporated (MI) for the production of materials and district notification. The numbers of students by form and disability sampled for videotaping are reported in Exhibit 52.

Exhibit 52: Stratified Sample of Students Identified for Videotaped Administrations

	Elementary		Middle		High School	
	N	%	N	%	N	%
PRIMARY DISABILITY						
Severe Mental Disability	12	15.2	15	20.3	10	15.4
Moderate Mental Disability	17	21.5	25	33.8	24	36.9
Mild Mental Disability	18	22.8	11	14.9	15	23.1
Autism	19	24.1	15	20.3	10	15.4
Other Disabilities	13	16.5	8	10.8	6	9.2
TOTAL	79		74		65	

Videotaping Procedures

The district test coordinators for alternate assessment were provided rosters of the students identified for videotaping. The district materials included a packet of information for each teacher that included:

- A videotaping student roster identifying the student;
- Information on the purpose of the videotaping and instructions for how to conduct the videotaped administrations;
- A videotaping student information form;

- Bar code labels for positive identification of the videotapes and the student information form to the SC-Alt assessment data file; and
- Directions for the packaging and return of materials.

The communications to both the teachers and the district test coordinators emphasized the importance of completing the videotaped administrations, provided contact information for questions or concerns, and asked for notification of SCDE if there were a problem in completing a videotaped administration for a particular student. Districts notified SCDE about a small number of students who either could not be assessed (e.g., because the students had moved, or were not going to be assessed with the SC-Alt) or for whom the videotaping was inappropriate or extremely difficult to implement (e.g., medical homebound students).

Most students that were deleted from the video sample list by SCDE were replaced by another student with the same teacher, or in a few cases by identifying a different teacher and student. The replacement students were selected to match the grade-span form and disability of the original student as closely as possible. As a result of notifications by districts, the SCDE deleted 13 students from the original sample and instructed districts to videotape 11 replacement students.

Analysis of Video Rater Data

During the spring 2007 administration of the SC-Alt, a sample of test administration sessions was videotaped for the purpose of evaluating scoring consistency and accuracy. Consistency and accuracy of scoring refers to the degree to which teachers followed the scaffolding and scoring directions correctly and assigned correct scores to student responses. The videotapes were reviewed independently by AIR staff who were trained in scoring responses to SC-Alt items. The video raters recorded student scores as observed in the student videos. A senior AIR alternate assessment specialist reviewed a 10% sample of these records to ensure accuracy and also resolved any additional issues encountered during coding of the videotapes.

Videotaping materials were received for 128 of the students identified for videotaping. Of these, 6 sets of the videotapes were damaged or for other reasons could not be viewed. Additionally, 4 videotape records could not be linked to operational data. The final number of students in the attained sample was 118. This sample is summarized in Exhibit 52.

Comparing the attained video rater (VR) sample to the identified sample (see Exhibit 51), the following statements can be made:

By Form

- The attained sample approximates the expected number of students for each form: Elementary students make up 38.1% of the sample, middle school students make up 33.1% of the sample, and high school students make up 28.8% of the sample.

By Primary Disability

- Severe Mental Disability was sampled similarly to the expectation across forms (elementary school: 22.22%, middle school: 20.51%, and high school: 14.71%).

- Moderate Mental Disability was sampled at a similar rate (24.44%, 33.33%, and 32.35%) to the expectation.
- Mild Mental Disability was sampled at a lower rate across elementary and middle school and a similar rate for high school (20.00%, 10.26%, and 26.47%) than expected.
- Autism was sampled at a higher rate than expected (22.22%, 28.21%, and 17.65%).
- The total percentages of students in disability categories other than Severe, Moderate, and Mild Disability, and Autism, were represented in similar rates to the identified sample (11.10%, 7.68%, and 8.82%).

Comparing the attained VR sample to the assessed population (see Exhibit 9), the following statements can be made:

By Other Demographic Variables

- For other demographic variables, the proportions in the attained VR sample appear to generally correspond to those seen in the total assessed population, when data were available. In the sample, only African American (49%–64%),[3] Hispanic (0%–4%), White (36%–47%), and White/African American (0%–1%) ethnicities were reported. These groups represent the majority of ethnicities in the total population. Gender is distributed as approximately two males for each female – this ratio is greater for the High School Form. "English Speaker II" (98% - 100%) and "Pre-functional" (0% - 1%) are the only ESL categories attained, reflecting the majority of students in the total population. At least 62% of students in the sample were eligible for Free lunch, slightly more than the total population. Slightly more students in the sample were also eligible for Reduced lunch when compared to the total population. None of the students in the attained VR sample were home schooled or migrant and only two students were medical homebound – these results are comparable to the population which reported typically less than 1% for each of these demographic variables and never more than 4%.

The attained VR sample (Exhibit 53) appears to reasonably represent the identified sample (Exhibit 52) as well as the full population (Exhibit 9). The demographic variables of interest are present in the attained sample data within acceptable ranges of the identified sample and the assessed population.

[3] The percentage range is reported across the three levels for which there are test forms – elementary, middle, and high school.

Exhibit 53: Demographic Frequencies for the Video Rater Data Sample—by Test Form

	Elementary		Middle		High	
	N	**%**	**N**	**%**	**N**	**%**
STUDENT'S ETHNICITY						
African American	22	48.89	25	64.10	17	50.00
American Indian	.	0	.	0	.	0
Asian	.	0	.	0	.	0
Hawaiian/Pacific Islander	.	0	.	0	.	0
Hispanic	2	4.44	.	0	1	2.94
White	20	44.44	14	35.90	16	47.06
White/African American	1	2.22	.	0	.	0
White/American Indian	.	0	.	0	.	0
White/Asian	.	0	.	0	.	0
Other	.	0	.	0	.	0
STUDENT'S GENDER						
Female	16	35.56	16	41.03	8	23.53
Male	29	64.44	23	58.97	26	76.47
ESL (LANGUAGE)						
Advanced	.	0	.	0	.	0
Beginner	.	0	.	0	.	0
Full English proficient	.	0	.	0	.	0
Intermediate	.	0	.	0	.	0
Pre-functional Waiver	.	0	.	0	.	0
Beginner Waiver	.	0	.	0	.	0
English speaker II	44	97.78	39	100.00	34	100.00
Pre-functional	1	2.22	.	0	.	0
Title III exited	.	0	.	0	.	0
ELIGIBLE FOR FREE OR REDUCED-PRICE LUNCH						
Free	30	66.67	27	69.23	21	61.76
No	10	22.22	7	17.95	11	32.35
Reduced	5	11.11	5	12.82	2	5.88
EFA GRADE (REPORTED GRADE FOR FUNDING)						
1	.	0	.	0	.	0
2	1	2.22	.	0	.	0
3	29	64.44	.	0	.	0
4	6	13.33	.	0	1	2.94
5	6	13.33	8	20.51	.	0
6	2	4.44	17	43.59	2	5.88
7	.	0	8	20.51	.	0
8	1	2.22	3	7.69	3	8.82
9	.	0	3	7.69	13	38.24
10	.	0	.	0	14	41.18
11	.	0	.	0	1	2.94
12	.	0	.	0	.	0
TOTAL	45	100	39	100	34	100

	Elementary		Middle		High	
	N	**%**	**N**	**%**	**N**	**%**
Completion Status: Student satisfied attemptedness rule						
ELA	45	100.00	39	100.00	33	97.06
Mathematics	45	100.00	39	100.00	33	97.06
Science	44	97.78	39	100.00	34	100.00
Social Studies	44	97.78	39	100.00	.	0
Completion Status: Student did not answer any content area-items						
ELA	.	0	.	0	1	2.94
Mathematics	.	0	.	0	1	2.94
Science	1	2.22	.	0	.	0
Social Studies	1	2.22	.	0	.	0
Migrant Status	.	0	.	0	.	0
Home schooled	.	0	.	0	.	0
Medical Homebound	.	0	.	0	2	5.88
PRIMARY DISABILITY						
Severe Mental Disability	10	22.22	8	20.51	5	14.71
Moderate Mental Disability	11	24.44	13	33.33	11	32.35
Mild Mental Disability	9	20.00	4	10.26	9	26.47
Autism	10	22.22	11	28.21	6	17.65
Deaf/Blindness	.	0	.	0	.	0
Emotional Disability	.	0	1	2.56	.	0
Hearing Impairment	2	4.44	.	0	.	0
Learning Disability	.	0	.	0	.	0
Multiple Disabilities	.	0	.	0	1	2.94
Other Health Impairment	1	2.22	1	2.56	1	2.94
Orthopedic Impairment	1	2.22	.	0	1	2.94
Speech Language Impairment	.	0	.	0	.	0
Traumatic Brain Injury	.	0	1	2.56	.	0
Visual Impairment	1	2.22	.	0	.	0
TOTAL	45	100	39	100	34	100

Item Agreement Analysis

Within each grade band, the absolute difference between test administrator (TA) scores and AIR video rater (VR) scores for each item was computed. Scores that do not differ between TA and VR are noted as “equal”; scores differing by +/- 1 score point are noted as “adjacent”; scores differing by more than +/- 1 point are flagged as “discrepant.” The agreement data are summarized by content area and grade band in Exhibit 54, where values indicate the average percentage of items falling within each agreement category for which there were valid matched responses across TAs and VRs.

Exhibit 54: Average Item Agreement Statistics by Grade-Band and Subject

Grade-Band	Subject	Agreement		
		Equal	**Adjacent**	**Discrepant**
Elementary	ELA	87.64%	10.18%	2.19%
	Mathematics	91.77%	7.39%	0.83%
	Science	90.40%	8.29%	1.31%
	Social St.	90.35%	8.77%	0.89%
Middle	ELA	91.97%	6.26%	1.77%
	Mathematics	86.33%	9.76%	3.91%
	Science	88.59%	8.06%	3.35%
	Social St.	89.67%	7.31%	3.02%
High	ELA	91.79%	5.47%	2.74%
	Mathematics	88.87%	7.85%	3.27%
	Science	87.59%	10.43%	1.97%
	Social St.	x	x	x

Across content areas for the elementary school form, the majority of items (88% - 92%) were shown to be scored as "equal" between the TA and VR, "adjacent" ratings were next most prevalent (7% - 10%), and "discrepant" ratings were the least prevalent for all content area areas (1% - 2%). On the middle school form, all content area areas show a pattern similar to the elementary form. "Equal" categorizations account for the majority of ratings (86% - 92%), the "adjacent" category is next most prevalent (6% - 10%), and "discrepant" results account for the smallest proportion of ratings (2% - 4%). Across content areas on the high school form, "equal" ratings again account for the largest proportion (88% - 92%), "adjacent" is the next most prevalent (5% - 10%), then "discrepant" (2% - 3%).

Classification Consistency Analysis (as distinct from scoring consistency just discussed in the previous section)

The reported performance levels for each student are derived from a scale score to performance level conversion process. Scale scores are produced based on conversions from the raw scores assigned by the TA. From these scale scores, students were assigned to one of four performance levels (i.e., levels 1, 2, 3, or 4) within each grade band and content area assessment. Using the VR item scores, correspondence between reported (TA) performance levels and VR performance levels was assessed according to the kappa and weighted kappa coefficients. In ELA, mathematics, science, and social studies, consistency is assessed through *weighted kappa* (Agresti, 1990; Spitzer, Cohen, Fleiss, & Endicott, 1967), which is appropriate for ordered categories:

$$\kappa_w = \frac{\sum\sum w_{ij}\pi_{ij} - \sum\sum w_{ij}\pi_{i+}\pi_{+j}}{1-\sum\sum w_{ij}\pi_{i+}\pi_{+j}},$$

where i is the category assigned by the TA, j is the category assigned by the VR, $w_{ij} = 1-(i-j)^2/(I-1)^2$ are the weights, π_{ij} is the probability of being classified as ij, and "+"

indicates agreement between categories. Kappa equals 0 when the agreement is that expected by chance; and kappa equals 1 when there is perfect agreement among raters.

Under the current condition, it must be noted that not all cases included in this analysis contained complete data. Exhibit 55 indicates the *effective sample size* ("n"; cases with information used in the content area-by-form calculation) as well as the *missing count* ("n missing"; indicating students assigned to the current test form with no data for the specified content area).

Exhibit 55: Agreement Statistics by Subject and Grade-Band

Grade-Band	Subject	κw	95%CI	n / n missing
Elementary	ELA	0.7103	0.54 - 0.89	31 / 14
	Mathematics	0.7808	0.62 - 0.94	32 / 13
	Science	0.9305	0.85 - 1.00	33 / 12
	Social St.	0.9058	0.80 - 1.00	35 / 10
Middle	ELA	0.8847	0.71 - 1.00	26 / 13
	Mathematics	0.7220	0.53 - 0.91	22 / 17
	Science	0.9238	0.84 - 1.00	29 / 10
	Social St.	0.8134	0.69 - 0.94	31 / 8
High	ELA	0.8735	0.76 - 0.99	26 / 8
	Mathematics	0.7536	0.58 - 0.92	23 / 11
	Science	0.7645	0.62 - 0.91	28 / 6
	Social St.	x	x	x
Note: all values are significant ($p < 0.05$)				

Summary

TA and VR assignments of students to performance levels typically show high levels of agreement, as weighted kappa typically ranges from 0.71 to 0.93. Further, the 95% confidence intervals show that, while sample sizes for the current calculations may be small, the agreement indices are significantly greater than chance agreement and often approach 1.00. Based on the current evidence, we can conclude that the SC-Alt was accurately scored.

Appendix D: Descriptions of Achievement Levels (DALs)

	English Language Arts Descriptions of Achievement Levels			
Performance Level	**ELA Achievement Level Definitions**	**Grades 3–5**	**Grades 6–8**	**Grade 10**
1	Students performing at level 1 demonstrate emerging academic skills and competencies in reading, writing, and communication.	Students performing at level 1 should be able to • attend to a variety of text read aloud as evidenced by facial expressions, gestures, or sounds; • attend to a writing activity using objects, pictures, or letters; • respond to conversations using facial expressions, gestures, or sounds; • attend to a speaker.	Students performing at level 1 should be able to • attend and respond to a variety of text read aloud as evidenced by facial expressions, gestures, or sounds; • demonstrate involvement in a writing activity using objects, pictures, or letters; • participate in conversations as evidenced by facial expressions, gestures, or sounds; • attend and listen to a speaker.	Students performing at level 1 should be able to • respond to a variety of texts read aloud as evidenced by facial expressions, gestures, or sounds; • demonstrate involvement in a writing activity using objects, pictures, or letters; • participate in conversations as evidenced by facial expressions, gestures, or sounds; • attend, listen, and respond to a speaker.
2	Students performing at level 2 demonstrate foundational academic skills and competencies in reading, writing, and communication.	Students performing at level 2 should be able to • participate in reading activities by telling or showing what the text is about, using objects, pictures, or words; • identify individual words; • identify story elements (e.g., main idea, events, setting, and characters); • use oral and written language to describe; • choose topics and generate ideas for written communication; • focus attention on a speaker and listen without interrupting; • participate in conversations by responding appropriately.	Students performing at level 2 should be able to • participate in reading activities by telling or showing what the text is about, using objects, pictures, or words; • participate in reading a variety of texts (e.g., recipes or advertisements); • identify story elements (e.g., main idea, events, setting, characters, and conflict); • make connections within and between texts; • use oral and written language to explain; • choose topics and generate ideas for written communication; • focus attention on a speaker and listen without interrupting; • participate in conversations by responding appropriately; • follow oral and/or written directions.	Students performing at level 2 should be able to • participate in reading activities by telling or showing what the text is about; • participate in reading a variety of texts (e.g., recipes, advertisements, schedules, and newspapers); • identify story elements (e.g., main idea, events, setting, characters, conflict, and plot); • gather meaning from graphic representations; • use oral and written language to explain, inform, and describe; • generate ideas for written communication; • edit own writing; • focus attention on a speaker and listen without interrupting; • participate in conversations by responding appropriately.

	English Language Arts Descriptions of Achievement Levels			
Performance Level	**ELA Achievement Level Definitions**	**Grades 3–5**	**Grades 6–8**	**Grade 10**
3	Students performing at level 3 demonstrate increasing academic skills and competencies in reading, writing, and communication.	Students performing at level 3 should be able to • identify story elements in text (e.g., characters, settings, events, cause and effect, and problem solution); • read words and simple sentences; • generate an idea and use words, pictures, or oral language to write; • follow one-step oral or signed directions; • communicate agreement or disagreement appropriately.	Students performing at level 3 should be able to • identify and recall details in text including main idea, plot, characters, and setting; • make predictions about events in text; • determine meaning of unfamiliar words; • generate an idea and use words, pictures, or oral language to write; • follow directions; • initiate conversation.	Students performing at level 3 should be able to • respond to or make connections with text (plot, characters, setting); • make inferences about events in text; • understand multiple meanings of words; • compare and contrast story elements from different stories; • discriminate fact from fiction; • generate an idea and use words, pictures, or oral language to write; • follow directions; • initiate conversation.
4	Students performing at level 4 demonstrate and apply academic skills and competencies in reading, writing, and communication.	Students performing at level 4 should be able to • identify story elements such as the main idea and cause and effect; • make predictions and draw conclusions about text; • read and understand the main idea of a simple paragraph; • create and edit personal written products; • follow multistep oral or signed directions; • take turns appropriately during conversation or discussion.	Students performing at level 4 should be able to • recognize and recall details in text, including the main idea, plot, characters, and setting; • draw conclusions and make predictions and inferences about the text; • read and understand the main idea of a simple paragraph; • explain word meanings; • create and edit personal written products; • follow oral/signed or written directions; • initiate and retell conversations.	Students performing at level 4 should be able to • recognize and recall details in text, including the main idea, plot, characters, and setting; • draw conclusions, and make predictions and inferences about the text; • read and understand the main idea of a short story; • use context clues to understand the meaning of unknown words; • make connections within and between texts and to prior knowledge, other texts, and the world; • create and edit personal written products; • use graphic representations as sources of information.

	Mathematics Descriptions of Achievement Levels			
Performance Level	**Mathematics Achievement Level Definitions**	**Grades 3–5**	**Grades 6–8**	**Grade 10**
1	Students performing at level 1 demonstrate emerging academic skills and competencies in mathematics.	Students performing at level 1 should be able to • attend to/manipulate one concrete object; • observe that two geometric figures have the same attributes; • observe attributes of objects, such as length and weight.	Students performing at level 1 should be able to • recognize the concept of one in counting objects; • recognize that two geometric figures have the same attributes; • observe attributes of objects, such as length weight and size/volume.	Students performing at level 1 should be able to • recognize the concept of one more in counting objects; • match geometric figures that have the same attributes; • respond to positional concepts such as on top of or under, off-on, above and below; • match objects by one attribute such as length, weight, and size/volume.
2	Students performing at level 2 demonstrate foundational academic skills and competencies in mathematics.	Students performing at level 2 should be able to • count objects in a set; • identify objects by one attribute (color, size, shape); • classify two - and three-dimensional concrete objects according to one attribute; • recognize positional concepts (on/off); • identify measurement tools, including graphs.	Students performing at level 2 should be able to • add and subtract using concrete objects; • classify objects by one attribute (color, size, shape); • recognize and demonstrate understanding of positional concepts (on/off, below/above); • use nonstandard units to measure; • match the correct tool to a specific task (i.e. measure length, weight, time); • identify parts of a chart, graph, or table.	Students performing at level 2 should be able to • solve addition and subtraction problems; • Identify operations (+ or -); • tell which has more in a set; • identify the value of coins (penny, nickel, dime, quarter); • identify a repeating relationship (pattern); • sort and classify objects by one attribute, (length, height, weight volume); • use a graph or chart to gain information.

	Mathematics Descriptions of Achievement Levels			
3	Students performing at level 3 demonstrate increasing academic skills and competencies in mathematics.	Students performing at level 3 should be able to • demonstrate addition and subtraction concretely or symbolically; • count and compare objects in a set; • sort and classify objects by attribute (shape, size); • identify three-dimensional shapes (cube, sphere, cylinder); • use nonstandard units to measure; • find answers to questions in a graph.	Students performing at level 3 should be able to • identify the answer to one-digit addition and subtraction problems; • identify a set as having more, fewer, or the same number as another set; • identify and extend a repeating pattern; • compare three-dimensional shapes by attribute; • compare length of two objects (shorter/longer); • interpret information displayed in a graph.	Students performing at level 3 should be able to • identify the process for solving an addition or a subtraction problem; • identify and use operational symbols correctly; • estimate the number of objects in a set; • add to find value of a set of coins; • describe, create, and complete a repeating pattern; • use and organize data to create charts, graphs, and tables.
4	Students performing at level 4 demonstrate and apply academic skills and competencies in mathematics.	Students performing at level 4 should be able to • demonstrate understanding of addition and subtraction; • generate a pattern using three-dimensional shapes (cube, sphere, cylinder); • compare objects by attribute (length, size); • interpret information displayed in a graph.	Students performing at level 4 should be able to • solve addition and subtraction facts without regrouping; • identify, describe, and extend a repeating pattern; • interpret information displayed in a graph; • use data to create graphs or tables.	Students performing at level 4 should be able to • identify, compare, and construct numbers; • use operation symbols (more than less than and equal to) to solve problems; • add to find the value of a set of two or more coins; • identify, describe, create, extend, and complete a repeating pattern; • describe events as more likely or less likely to occur; • use and organize data to create and interpret graphs.

	Science Descriptions of Achievement Levels			
Performance Level	**Science Achievement Level Definitions**	**Grades 3–5**	**Grades 6–8**	**Grade 10**
1	Students performing at level 1 demonstrate emerging academic skills and competencies in science.	Students performing at level 1 should be able to • attend to a science investigation; • observe sequence of growth (e.g., young and old); • attend to daily weather conditions; • recognize sun and moon in reference to day and night; • observe objects in motion.	Students performing at level 1 should be able to • attend and participate in a scientific investigation; • identify major body parts of animals; • identify sun and moon; • observe the motion of objects; • sort by one attribute.	Students performing at level 1 should be able to • attend and respond to a scientific investigation; • attend to objects moved by force; • observe that an object at rest moves.
2	Students performing at level 2 demonstrate foundational academic skills and competencies in science.	Students performing at level 2 should be able to • participate in a scientific investigation; • distinguish young from old; • identify daily weather conditions; • match appropriate activities to day and night (go to school during the day/sleep at night); • identify the position of objects such as above/below, inside, or on top; • describe materials by observable properties.	Students performing at level 2 should be able to • predict the results of a scientific investigation; • sort and describe materials by observable properties; • match major organs of animals to their function; • identify the pattern of day and night; • identify if an object is moving; • identify the role of a switch in a simple electrical circuit.	Students performing at level 2 should be able to • explain information or events based on observation; • identify the force that makes an object move; • predict the outcome of a scientific investigation related to electricity or force and motion.
3	Students performing at level 3 demonstrate increasing academic skills and competencies in science.	Students performing at level 3 should be able to • classify events in sequential order; • conduct a simple scientific investigation; • match a tool to the task; • identify living and nonliving things; • identify major organs of animals; • compare daily changes in weather conditions; • identify water in solid and liquid form; • identify the temperature on a thermometer as hot or cold.	Students performing at level 3 should be able to • predict the outcome of a scientific investigation and compare the results with the prediction; • read data from simple tools; • use graphs, tables, or diagrams to gain information; • identify the characteristics of living and nonliving things; • identify what plants need to grow; • identify functions of major organs of animals; • identify the changes in the seasons.	Students performing at level 3 should be able to • predict the outcome of a scientific investigation and compare the results with the prediction as they relate to force and motion, friction and gravity; • compare magnetic and nonmagnetic objects; • identify electricity as a source of energy; • relate the change in force to the change in speed.
4	Students performing at level 4 demonstrate and apply academic skills and competencies in science.	Students performing at level 4 should • gain meaning from graphs and tables; • conduct and analyze the results of a scientific investigation; • identify major organs of animals and their functions; • identify living and nonliving things in terms of a food web; • identify natural resources as renewable or nonrenewable; • identify how heat and light change from season to season.	Students performing at level 4 should be able to • conduct and analyze the results of a scientific investigation; • gain meaning from graphs, tables, or diagrams; • describe what plants need to survive; • describe temperature ranges; • identify simple machines (inclined plane, lever, pulley); • identify how heat and light change from season to season.	Students performing at level 4 should be able to • plan, conduct, and analyze the results of a scientific investigation; • identify how simple machines are used to help people (inclined plane, lever, pulley, etc.); • predict and identify the effect of the change in force on an object; • describe water as solid, steam, or liquid; • investigate how to increase the speed of a falling object.

	Social Studies Descriptions of Achievement Levels		
Performance Level	**Social Studies Achievement Level Definitions**	**Grades 3–5**	**Grades 6–8**
1	Students performing at level 1 demonstrate emerging academic skills and competencies in social studies.	Students performing at level 1 should be able to • identify self from others • respond to a person in authority in the home or school; • follow class rules; • engage in turn-taking; • attend to information presented orally about South Carolina history.	Students performing at level 1 should be able to • identify self from others; • respond to familiar authority figures; • follow class rules; • engage in turn-taking and sharing; • respond to information about significant and historical events in South Carolina.
2	Students performing at level 2 demonstrate foundational skills and competencies in social studies.	Students performing at level 2 should be able to • identify characteristics such as gender that help identify self in relation to others; • match workers to different jobs in the community; • recognize people in authority and follow class rules; • match the people we honor on some national holidays (e.g., George Washington, Martin Luther King, Jr.) with the holidays; • match jobs of the past with jobs of the present; • match significant historical figures such as Thomas Edison to their inventions.	Students performing at level 2 should be able to • identify surroundings (e.g., classroom, school); • match different people to their jobs in the community; • identify people in authority and follow class rules; • demonstrate understanding of rules; • identify the people we honor on some national holidays (e.g., George Washington, Martin Luther King, Jr.); • identify the purpose of money; • match changes over time to the past and present such as communication.
3	Students performing at level 3 demonstrate increasing skills and competencies in social studies.	Students performing at level 3 should be able to • understand the concept of past and present; • demonstrate respect for people in authority; • identify major symbols of the United States; • identify why we celebrate the national holidays; • recognize that when we work we earn money to buy things; • identify features on a map of South Carolina (river, mountain, ocean); • answer questions about significant events related to the Civil War; • match accomplishments to historical figures such as Thomas Edison, Alexander Graham Bell, etc.	Students performing at level 3 should be able to • identify members of the larger community (e.g., police officers, fire-fighters, doctors); • demonstrate understanding of consequences of not following the rules; • Identify examples of good citizenship such as honesty, courage, etc.; • identify symbols of the United States (e.g., the flag, bald eagle); • demonstrate an understanding that we work to earn money and use money to buy things; • identify changes over time such as in travel, farming, etc.; • gain information from maps, charts, and graphs; • answer questions about key historical figures and significant historical events including the civil rights movement.
4	Students performing at level 4 demonstrate and apply academic skills and competencies in social studies.	Students performing at level 4 should be able to • place personal history on a time line; • identify the roles of leaders and officials in local government (e.g., principal, mayor, governor); • identify individuals who embody qualities of good citizenship; • identify examples of respect and fair treatment; • recognize that we exchange money for goods and services; • use a key to locate geographic features on a map of South Carolina; • answer questions about key concepts related to the Civil War; • answer questions about the accomplishments of key historical figures such as Thomas Edison, Alexander Graham Bell, etc.	Students performing at level 4 should be able to • place personal and family history on a time line; • Identify roles of leaders and officials in local government (e.g., principal, mayor, governor) • identify examples of the qualities of courage and patriotism; • identify examples of respect and fair treatment and their opposites; • recognize how the amount of money available determines what we can buy; • gain information from maps and charts; • identify the accomplishments of Civil Rights leaders including Rosa Parks.

Appendix E: Summary of Linking Design

How South Carolina Alternate Assessment Standards and Measurement Guidelines (ASMGs) Overlap across Grade Bands

Common threads across grade bands were targeted in the development of some ASMGs to promote consistent instruction across the curriculum from grade band to grade band. The difference in the essence of some standards is subtle in a number of academic standards across grade bands and in fact some standards are exactly the same in some of the content standards.

Structure of the tasks

- Each task has four to six items. The student responses to each item are scored from one to four points depending on demands of the response.
- Only one beginning item in the first three to five tasks in an academic content area is an engagement item. Each of the engagement items is aligned with the academic content standards through the ASMGs. The remaining items of the tasks are aligned to the academic content standards through the ASMGs at complexity levels ranging from low to high. Since every student must respond to all items in at least a minimum of five tasks, every student must respond to items that assess his or her knowledge of content and skills at the grade band to which he or she is assigned.
- Items and tasks progress upward in complexity and difficulty across the performance levels at the assigned grade band.

Structure of linking tasks

- ASMGs from adjacent grade bands were examined for common threads linked to content across the two grade bands for use in developing linking tasks.
- Some items were developed specifically to link to ASMGs that were common in academic demand across grade bands. Other items were designed specifically to assess only the ASMG content for a specific grade band.

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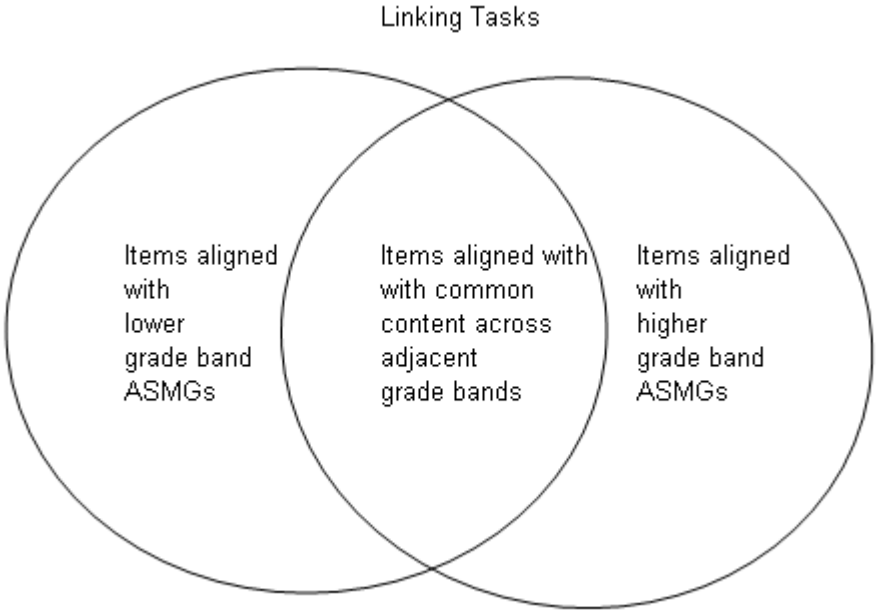
Linking Tasks
Items aligned with lower grade band ASMGs
Items aligned with with common content across adjacent grade bands
Items aligned with higher grade band ASMGs

Summary of Linking Design													
Test Description				Starting Positions									
				Starting Task 1		Within Grade-Band Linking		Starting Task 3		Within Grade-Band Linking		Starting Task 6	
Subject	Grade Band	Number of Items	Number of Tasks	Items	Tasks	Items	Tasks	Items	Tasks	Items	Tasks	Items	Tasks
ELA	3–5	68	12	32	5	19	3	38	7	19	4	36	7
	Across Grade-Band Linking	(29)											
	6–8	65	12	31	5	17	3	39	7	22	4	34	7
	Across Grade-Band Linking	(24)											
	10	64	12	28	5	16	3	37	7	21	4	36	7
Mathematics	3–5	53	12	23	5	14	3	30	7	16	4	30	7
	Across Grade-Band Linking	(37)											
	6–8	55	12	23	5	14	3	31	7	17	4	32	7
	Across Grade-Band Linking	(29)											
	10	60	12	24	5	15	3	34	7	19	4	36	7

Summary of Linking Design

Test Description				Starting Positions									
				Starting Task 1		Within Grade-Band Linking		Starting Task 3		Within Grade-Band Linking		Starting Task 6	
Subject	Grade Band	Number of Items	Number of Tasks	Items	Tasks	Items	Tasks	Items	Tasks	Items	Tasks	Items	Tasks
Science	3–5	58	12	26	5	16	3	35	7	19	4	32	7
	Across Grade-Band Linking	(25)											
	6–8	60	12	28	5	17	3	36	7	19	4	32	7
	Across Grade-Band Linking	(20)											
	10	56	12	26	5	15	3	33	7	18	4	30	7
Social Studies	3–5	82	19	29	7	12	3	33	8	8	2	40	9
	Across Grade-Band Linking	(37)											
	6–8	80	19	29	7	12	3	33	8	9	2	39	9
	10	x	x	x	x	x	x	x	x	x	x	x	x

Appendix F: Item Statistics Summaries for the Spring 2007 Operational Items (ELA, Mathematics, and Science) and Social Studies Field Test

Grade Band 3–5 English Language Arts Classical Item Statistics

ITS Item ID	Item Position	Adjusted Biserial/ Polyserial	Average Score	Omit	Access Limitation	DIF	
						Female vs. Male	Black vs. White
607	1	0.59	0.65	0.00	0.01	-A	+A
672	2	0.43	0.53	0.00	0.02	-A	+A
294	3	0.61	0.74	0.00	0.02	+A	+A
295	4	0.45	0.44	0.00	0.02	+A	-A
296	5	0.62	0.73	0.00	0.03	-A	-A
297	6	0.49	0.37	0.02	0.02	-A	+A
667	7	0.54	0.73	0.00	0.06	-A	+A
668	8	0.50	0.65	0.00	0.00	+A	-A
331	9	0.76	0.78	0.00	0.00	+A	-A
329	10	0.76	0.77	0.00	0.00	-A	-B
333	11	0.74	0.76	0.02	0.01	-A	-A
344	12	0.63	0.65	0.02	0.03	+A	+A
355	13	0.45	0.37	0.00	0.01	+A	-A
669	14	0.69	0.78	0.01	0.00	+A	-A
427	15	0.35	0.62	0.01	0.00	-A	+A
430	16	0.47	0.42	0.01	0.00	-A	+A
428	17	0.46	0.51	0.01	0.00	+A	-A
429	18	0.38	0.43	0.01	0.01	-A	-A
431	19	0.47	0.55	0.01	0.02	+A	-A
370	20	0.63	0.71	0.00	0.00	+A	-A
549	21	0.39	0.41	0.00	0.00	-A	-A
550	22	0.50	0.47	0.00	0.00	+A	-A
551	23	0.48	0.52	0.00	0.00	+B	-A
552	24	0.44	0.50	0.02	0.02	+A	+A
553	25	0.40	0.38	0.00	0.00	+A	-A
554	26	0.54	0.60	0.00	0.00	+A	+A
597	27	0.59	0.85	0.00	0.00	+A	-A
601	28	0.60	0.66	0.00	0.00	-A	-A
609	29	0.49	0.49	0.00	0.01	+A	-A
608	30	0.74	0.83	0.00	0.00	+A	-A
610	31	0.58	0.74	0.00	0.00	-A	-A
611	32	0.34	0.37	0.00	0.01	+A	-A
64	33	0.47	0.69	0.00	0.01	+A	-A
67	34	0.45	0.73	0.00	0.00	+A	+A
68	35	0.39	0.79	0.00	0.01	+A	-A
69	36	0.46	0.74	0.00	0.02	-A	-A
70	37	0.49	0.61	0.00	0.00	-B	+A

484	38	0.38	0.85	0.00	0.00	-A	-A
483	39	0.38	0.84	0.00	0.01	-A	+A
485	40	0.37	0.85	0.00	0.00	-A	+A
496	41	0.44	0.77	0.00	0.01	-A	+A

ITS Item ID	Item Position	Adjusted Biserial/ Polyserial	Average Score	Omit	Access Limitation	DIF	
						Female vs. Male	Black vs. White
486	42	0.36	0.84	0.00	0.00	+A	+B
587	43	0.24	0.72	0.00	0.00	+A	+A
588	44	0.31	0.73	0.00	0.00	+A	+A
603	45	0.33	0.71	0.00	0.00	-A	+A
618	46	0.32	0.69	0.00	0.00	+A	+A
133	47	0.30	0.80	0.00	0.00	+A	-A
134	48	0.34	0.66	0.00	0.00	+A	+A
135	49	0.41	0.68	0.00	0.00	+A	+A
136	50	0.42	0.86	0.00	0.00	-A	+A
137	51	0.27	0.57	0.00	0.00	-A	+A
469	52	0.26	0.71	0.00	0.00	-A	+A
425	53	0.26	0.75	0.00	0.01	-A	+A
471	54	0.24	0.80	0.00	0.00	+A	+B
424	55	0.33	0.78	0.00	0.00	-A	+A
686	56	0.23	0.51	0.00	0.00	-A	-A
472	57	0.16	0.63	0.00	0.00	+A	+A
82	58	0.31	0.83	0.00	0.00	-A	-A
83	59	0.22	0.71	0.00	0.00	+A	-A
85	60	0.17	0.57	0.00	0.00	+A	-A
89	61	0.16	0.42	0.00	0.01	-A	+A
95	62	0.20	0.55	0.00	0.00	-A	+A
487	63	0.30	0.73	0.00	0.01	+B	+A
488	64	0.20	0.73	0.00	0.01	+A	+A
493	65	0.18	0.67	0.00	0.01	+A	-A
489	66	0.28	0.82	0.00	0.02	+A	+A
573	67	0.17	0.76	0.00	0.02	-A	-A
574	68	0.23	0.66	0.00	0.03	+A	+A

Grade Band 6–8 English Language Arts Classical Item Statistics

ITS Item ID	Item Position	Adjusted Biserial/ Polyserial	Average Score	Omit	Access Limitation	DIF	
						Female vs. Male	Black vs. White
667	1	0.53	0.71	0.00	0.03	-A	+A
668	2	0.48	0.63	0.00	0.06	-A	+A
331	3	0.54	0.70	0.00	0.00	-C	-A
329	4	0.58	0.75	0.00	0.00	-A	-A
333	5	0.60	0.74	0.00	0.00	+A	+A
344	6	0.54	0.65	0.00	0.00	-A	-A
355	7	0.45	0.36	0.00	0.00	+A	+A
680	8	0.58	0.64	0.00	0.01	+A	-A
631	9	0.57	0.72	0.00	0.02	-A	+A
632	10	0.31	0.38	0.00	0.00	+A	-A
634	11	0.47	0.39	0.00	0.00	-A	-A
657	12	0.48	0.41	0.00	0.00	+A	+B
664	13	0.32	0.36	0.00	0.00	+C	-A
648	14	0.60	0.43	0.00	0.00	+B	+A
681	15	0.63	0.74	0.00	0.01	+A	-A
50	16	0.53	0.53	0.00	0.00	+A	-A
52	17	0.53	0.45	0.02	0.00	-A	+A
55	18	0.60	0.49	0.02	0.00	-A	-A
53	19	0.68	0.60	0.02	0.00	+A	-A
116	20	0.47	0.43	0.02	0.00	+A	-A
597	21	0.55	0.85	0.02	0.01	+A	+A
601	22	0.70	0.61	0.02	0.03	+A	+A
609	23	0.44	0.49	0.00	0.00	-A	+A
608	24	0.53	0.79	0.00	0.00	+A	-A
610	25	0.57	0.75	0.00	0.00	+A	-A
611	26	0.41	0.38	0.00	0.00	-A	+A
64	27	0.46	0.54	0.00	0.00	+A	-A
67	28	0.59	0.53	0.02	0.03	+A	-A
68	29	0.56	0.57	0.00	0.00	+B	-A
69	30	0.52	0.55	0.00	0.00	+B	-A
70	31	0.52	0.38	0.00	0.00	+B	-A
279	32	0.62	0.88	0.00	0.01	-A	+A
280	33	0.65	0.86	0.00	0.01	+A	+A
281	34	0.62	0.84	0.00	0.00	-A	-A
282	35	0.66	0.84	0.00	0.00	+A	-A
285	36	0.59	0.79	0.00	0.00	-A	-A
288	37	0.55	0.79	0.00	0.00	+A	+A
498	38	0.46	0.86	0.00	0.01	+A	-A
500	39	0.35	0.66	0.00	0.00	-A	-A
501	40	0.25	0.76	0.00	0.00	-A	-A

502	41	0.40	0.61	0.00	0.00	-A	+A

ITS Item ID	Item Position	Adjusted Biserial/ Polyserial	Average Score	Omit	Access Limitation	DIF	
						Female vs. Male	Black vs. White
503	42	0.37	0.63	0.00	0.00	-A	+B
469	43	0.42	0.74	0.00	0.00	-A	+A
425	44	0.46	0.76	0.00	0.00	-A	+A
471	45	0.29	0.79	0.00	0.00	+A	-A
424	46	0.41	0.79	0.00	0.00	+A	-A
686	47	0.29	0.55	0.00	0.01	-A	+A
472	48	0.20	0.66	0.00	0.00	-A	-A
82	49	0.49	0.84	0.00	0.00	-A	-A
83	50	0.34	0.71	0.00	0.00	+A	-A
85	51	0.35	0.61	0.00	0.00	+A	+A
89	52	0.22	0.46	0.00	0.00	-A	+A
95	53	0.28	0.59	0.00	0.01	+A	+A
441	54	0.20	0.79	0.00	0.00	-A	+A
438	55	0.34	0.73	0.00	0.00	-A	+A
440	56	0.38	0.80	0.00	0.00	-A	+A
439	57	0.29	0.78	0.00	0.00	-A	+A
101	58	0.32	0.84	0.00	0.01	+B	-A
112	59	0.40	0.79	0.00	0.00	+A	+A
114	60	0.30	0.78	0.00	0.00	+A	+A
302	61	0.23	0.83	0.00	0.00	+A	+A
161	62	0.30	0.83	0.00	0.00	-A	+A
162	63	0.23	0.79	0.00	0.00	-A	-A
166	64	0.11	0.63	0.00	0.02	+A	-A
182	65	0.31	0.74	0.00	0.01	+A	+A

Grade 10 English Language Arts Classical Item Statistics

ITS Item ID	Item Position	Adjusted Biserial/ Polyserial	Average Score	Omit	Access Limitation	DIF	
						Female vs. Male	Black vs. White
680	1	0.47	0.63	0.00	0.02	+A	+A
631	2	0.50	0.63	0.00	0.02	+A	+A
632	3	0.46	0.48	0.00	0.01	+A	+C
634	4	0.51	0.36	0.00	0.02	+A	+A
657	5	0.53	0.40	0.00	0.04	-A	+A
664	6	0.35	0.29	0.00	0.05	-A	+C
648	7	0.57	0.37	0.00	0.00	-A	+A
683	8	0.51	0.65	0.00	0.01	+A	+A
626	9	0.63	0.47	0.00	0.01	+A	+A
627	10	0.72	0.42	0.00	0.01	+A	+A
628	11	0.58	0.31	0.00	0.02	+A	+C
629	12	0.53	0.25	0.05	0.03	+A	+A
682	13	0.65	0.74	0.00	0.05	+A	+A
432	14	0.57	0.42	0.00	0.00	-A	+A
434	15	0.57	0.59	0.00	0.01	-A	-A
435	16	0.69	0.60	0.00	0.00	-A	+A
436	17	0.59	0.56	0.00	0.00	+A	-A
437	18	0.58	0.46	0.00	0.01	-A	+C
433	19	0.54	0.33	0.00	0.02	-B	+A
498	20	0.52	0.68	0.00	0.00	+A	-A
500	21	0.47	0.50	0.00	0.00	-A	-A
501	22	0.48	0.56	0.00	0.00	-A	-A
502	23	0.48	0.39	0.00	0.00	-A	-A
503	24	0.42	0.42	0.00	0.01	-A	+A
441	25	0.42	0.59	0.03	0.03	-A	+A
438	26	0.62	0.46	0.00	0.00	-A	+A
440	27	0.54	0.58	0.00	0.00	-A	-A
439	28	0.58	0.55	0.00	0.00	-A	-A
523	29	0.59	0.76	0.00	0.01	+A	+A
524	30	0.42	0.73	0.00	0.00	+A	+A
525	31	0.61	0.79	0.00	0.00	+A	+A
526	32	0.42	0.65	0.00	0.00	-A	+C
527	33	0.47	0.64	0.00	0.00	-A	+A
560	34	0.39	0.70	0.00	0.00	-A	+A
561	35	0.47	0.74	0.00	0.01	-A	+A
562	36	0.35	0.77	0.00	0.02	-A	+A
575	37	0.53	0.69	0.00	0.00	+A	+A
564	38	0.45	0.76	0.00	0.00	-A	+A
565	39	0.57	0.80	0.00	0.00	-A	-A
566	40	0.38	0.55	0.00	0.00	+A	-A

567	41	0.62	0.81	0.00	0.00	-A	-A

ITS Item ID	Item Position	Adjusted Biserial/ Polyserial	Average Score	Omit	Access Limitation	DIF	
						Female vs. Male	Black vs. White
101	42	0.57	0.82	0.00	0.00	+A	+A
112	43	0.56	0.79	0.00	0.00	-A	-A
114	44	0.47	0.82	0.00	0.00	-A	+A
302	45	0.50	0.82	0.00	0.00	+A	-A
161	46	0.43	0.84	0.00	0.00	-A	+B
162	47	0.48	0.79	0.00	0.01	+A	-A
166	48	0.47	0.67	0.00	0.00	+A	-A
182	49	0.49	0.78	0.00	0.00	-A	+A
54	50	0.31	0.77	0.00	0.00	+A	+A
71	51	0.41	0.84	0.00	0.00	+A	+A
73	52	0.31	0.76	0.00	0.00	+A	+A
72	53	0.43	0.78	0.00	0.00	+A	+A
446	54	0.47	0.84	0.00	0.00	-A	+A
448	55	0.24	0.75	0.00	0.00	+A	-A
449	56	0.31	0.66	0.00	0.00	-A	+C
450	57	0.44	0.62	0.00	0.00	-A	+A
452	58	0.48	0.80	0.00	0.00	-A	+A
264	59	0.22	0.69	0.00	0.00	+A	+A
172	60	0.39	0.72	0.00	0.01	+A	+A
168	61	0.23	0.74	0.00	0.00	-A	+A
174	62	0.42	0.83	0.00	0.00	-A	+A
291	63	0.20	0.59	0.00	0.00	-A	+A
292	64	0.46	0.68	0.00	0.00	-A	-A

Grade Band 3–5 Mathematics Classical Item Statistics

ITS Item ID	Item Position	Adjusted Biserial/ Polyserial	Average Score	Omit	Access Limitation	DIF	
						Female vs. Male	Black vs. White
673	1	0.51	0.69	0.00	0.02	-A	+A
633	2	0.37	0.48	0.00	0.04	+B	-A
639	3	0.46	0.37	0.00	0.05	-A	-A
640	4	0.42	0.50	0.00	0.04	-A	+A
642	5	0.50	0.48	0.00	0.06	+A	-A
677	6	0.58	0.71	0.00	0.00	+A	+A
124	7	0.34	0.40	0.00	0.00	+A	+A
123	8	0.53	0.52	0.00	0.00	+B	-A
126	9	0.45	0.41	0.00	0.00	+A	+A
674	10	0.65	0.77	0.00	0.00	+A	-A
641	11	0.60	0.66	0.00	0.00	+A	+A
645	12	0.42	0.50	0.00	0.00	-A	-A
644	13	0.49	0.45	0.00	0.00	-A	-A
647	14	0.47	0.42	0.00	0.01	-A	+A
678	15	0.68	0.78	0.00	0.00	+A	-A
10	16	0.60	0.50	0.00	0.01	-A	+A
11	17	0.64	0.54	0.00	0.01	+A	+A
13	18	0.59	0.58	0.00	0.01	+A	-A
16	19	0.42	0.38	0.00	0.01	-A	-A
74	20	0.51	0.74	0.00	0.00	-A	+A
75	21	0.51	0.59	0.00	0.01	+A	-A
76	22	0.53	0.53	0.00	0.01	+A	+A
77	23	0.55	0.54	0.00	0.01	-A	-A
200	24	0.43	0.60	0.00	0.01	+A	-A
211	25	0.35	0.55	0.00	0.01	+B	+A
215	26	0.52	0.81	0.00	0.01	+A	-A
218	27	0.56	0.78	0.00	0.01	-A	-A
254	28	0.40	0.75	0.00	0.01	-A	-A
255	29	0.36	0.81	0.00	0.01	-A	-A
257	30	0.49	0.80	0.00	0.00	-A	-A
256	31	0.39	0.71	0.00	0.01	-A	-A
231	32	0.42	0.75	0.00	0.01	+A	+A
232	33	0.37	0.80	0.00	0.01	-A	-A
233	34	0.39	0.65	0.00	0.01	+A	+A
276	35	0.33	0.56	0.00	0.00	+A	+A
216	36	0.36	0.79	0.00	0.00	-A	+A
227	37	0.36	0.68	0.00	0.00	+A	+A
230	38	0.29	0.51	0.00	0.01	+A	-A
313	39	0.28	0.61	0.00	0.00	+A	+A
347	40	0.37	0.68	0.00	0.00	-A	-A

349	41	0.35	0.74	0.00	0.00	+A	-A

ITS Item ID	Item Position	Adjusted Biserial/ Polyserial	Average Score	Omit	Access Limitation	DIF	
						Female vs. Male	Black vs. White
351	42	0.38	0.75	0.00	0.00	+A	-A
352	43	0.41	0.66	0.00	0.02	+A	+A
41	44	0.24	0.87	0.00	0.00	-A	+A
37	45	0.31	0.87	0.00	0.01	+A	+A
43	46	0.23	0.80	0.00	0.01	-A	+A
42	47	0.15	0.85	0.00	0.02	+A	+A
245	48	0.09	0.66	0.00	0.02	-A	+A
246	49	0.13	0.68	0.00	0.01	+A	-A
247	50	0.21	0.60	0.00	0.00	+A	+A
248	51	0.20	0.56	0.00	0.00	+A	-A
249	52	0.15	0.59	0.00	0.01	-A	+A
250	53	0.15	0.46	0.00	0.01	-A	-A

Grade Band 6–8 Mathematics Classical Item Statistics

ITS Item ID	Item Position	Adjusted Biserial/ Polyserial	Average Score	Omit	Access Limitation	DIF	
						Female vs. Male	Black vs. White
673	1	0.57	0.67	0.00	0.04	+A	-A
633	2	0.43	0.54	0.00	0.00	-A	+A
639	3	0.53	0.35	0.00	0.00	+A	+A
640	4	0.35	0.45	0.00	0.00	+A	+A
642	5	0.47	0.43	0.00	0.00	+A	+A
677	6	0.55	0.67	0.00	0.01	+A	+A
124	7	0.49	0.33	0.00	0.00	-A	-A
123	8	0.59	0.40	0.00	0.00	-A	+A
126	9	0.50	0.38	0.00	0.01	-A	+A
674	10	0.56	0.73	0.00	0.01	+A	+A
641	11	0.57	0.66	0.00	0.01	-A	+A
645	12	0.49	0.47	0.00	0.02	+A	-A
644	13	0.51	0.42	0.00	0.00	-A	+A
647	14	0.35	0.39	0.00	0.00	+A	-A
678	15	0.66	0.77	0.00	0.00	+A	-A
10	16	0.60	0.47	0.00	0.01	+A	-A
11	17	0.64	0.54	0.00	0.00	-A	+A
13	18	0.57	0.58	0.00	0.00	+A	+A
16	19	0.47	0.37	0.00	0.00	+A	-A
30	20	0.51	0.76	0.00	0.00	+A	+A
33	21	0.58	0.44	0.00	0.00	+A	+A
78	22	0.65	0.44	0.00	0.00	+A	+A
80	23	0.54	0.59	0.00	0.00	-A	-A
254	24	0.66	0.77	0.00	0.00	+A	-A
255	25	0.63	0.80	0.00	0.00	-A	+A
257	26	0.67	0.80	0.00	0.00	+A	-A
256	27	0.59	0.75	0.00	0.00	-A	+A
458	28	0.53	0.84	0.00	0.00	-A	-A
459	29	0.46	0.63	0.00	0.00	-A	+A
461	30	0.40	0.71	0.00	0.01	+A	-A
473	31	0.39	0.51	0.00	0.00	+A	+A
462	32	0.42	0.68	0.00	0.00	+A	+A
231	33	0.52	0.77	0.00	0.00	-A	+A
232	34	0.47	0.82	0.00	0.00	+A	+B
233	35	0.52	0.69	0.00	0.00	-A	+A
276	36	0.42	0.56	0.00	0.00	-A	-A
347	37	0.52	0.73	0.00	0.00	+A	+A
349	38	0.53	0.75	0.00	0.00	-A	+A
351	39	0.59	0.78	0.00	0.00	-A	+A
352	40	0.59	0.66	0.00	0.00	-A	+A

317	41	0.29	0.66	0.00	0.00	-A	-A

ITS Item ID	Item Position	Adjusted Biserial/ Polyserial	Average Score	Omit	Access Limitation	DIF	
						Female vs. Male	Black vs. White
318	42	0.48	0.69	0.00	0.01	+A	-A
321	43	0.39	0.73	0.00	0.00	+A	-A
322	44	0.41	0.61	0.00	0.00	-A	+A
320	45	0.49	0.67	0.00	0.00	-A	+A
5	46	0.46	0.79	0.00	0.00	-A	+A
6	47	0.48	0.82	0.00	0.00	-A	+A
7	48	0.44	0.78	0.00	0.00	+A	+A
8	49	0.47	0.81	0.00	0.00	+A	+A
245	50	0.35	0.72	0.00	0.00	-A	+A
246	51	0.37	0.72	0.00	0.00	+A	+A
247	52	0.33	0.68	0.00	0.00	-A	+A
248	53	0.33	0.65	0.00	0.00	+A	+A
249	54	0.40	0.65	0.00	0.00	-A	-A
250	55	0.33	0.52	0.00	0.00	-A	-A

Grade 10 Mathematics Classical Item Statistics

ITS Item ID	Item Position	Adjusted Biserial/ Polyserial	Average Score	Omit	Access Limitation	DIF	
						Female vs. Male	Black vs. White
673	1	0.47	0.63	0.00	0.00	+A	+A
633	2	0.30	0.47	0.00	0.00	+A	+A
639	3	0.51	0.43	0.00	0.00	+A	+C
640	4	0.38	0.46	0.00	0.01	-A	+A
642	5	0.54	0.42	0.00	0.01	+A	+A
677	6	0.64	0.62	0.00	0.00	-A	+A
124	7	0.48	0.45	0.00	0.00	+A	+A
123	8	0.50	0.53	0.00	0.00	+A	+A
126	9	0.52	0.36	0.00	0.00	+A	+C
674	10	0.64	0.75	0.00	0.01	+A	-A
641	11	0.57	0.63	0.00	0.00	+A	+A
645	12	0.45	0.49	0.00	0.00	+A	+A
644	13	0.49	0.50	0.00	0.00	-A	+A
647	14	0.45	0.46	0.00	0.01	+A	-A
678	15	0.63	0.78	0.00	0.00	-A	-A
10	16	0.57	0.58	0.00	0.00	-A	+A
11	17	0.67	0.61	0.00	0.00	+A	-A
13	18	0.45	0.57	0.00	0.00	+A	+A
16	19	0.50	0.38	0.00	0.01	-A	+A
19	20	0.55	0.50	0.00	0.00	+A	+A
15	21	0.58	0.61	0.00	0.00	+A	+A
22	22	0.43	0.48	0.00	0.00	+A	+A
692	23	0.44	0.35	0.00	0.00	+A	+A
25	24	0.21	0.39	0.00	0.00	+A	-A
458	25	0.47	0.82	0.00	0.00	-A	+A
459	26	0.39	0.68	0.00	0.00	-A	+A
461	27	0.42	0.71	0.00	0.00	-A	+A
473	28	0.53	0.58	0.00	0.00	-A	+A
462	29	0.49	0.67	0.00	0.00	-A	+A
317	30	0.22	0.66	0.00	0.00	-A	+C
318	31	0.48	0.68	0.00	0.00	+A	+A
321	32	0.44	0.67	0.00	0.00	-A	-A
322	33	0.51	0.60	0.00	0.00	-A	+A
320	34	0.52	0.62	0.00	0.00	+A	-A
408	35	0.44	0.75	0.00	0.00	+A	+A
409	36	0.35	0.76	0.00	0.00	-A	+A
410	37	0.37	0.73	0.00	0.01	-A	+A
411	38	0.47	0.71	0.00	0.00	+A	-A
528	39	0.50	0.81	0.00	0.00	-A	+A
530	40	0.37	0.75	0.00	0.00	+A	+A

529	41	0.49	0.80	0.00	0.01	+C	+C

ITS Item ID	Item Position	Adjusted Biserial/ Polyserial	Average Score	Omit	Access Limitation	DIF	
						Female vs. Male	Black vs. White
539	42	0.32	0.72	0.00	0.01	+A	-A
537	43	0.49	0.57	0.00	0.01	+A	+A
35	44	0.41	0.68	0.00	0.01	-A	+C
44	45	0.36	0.65	0.00	0.01	-B	+A
45	46	0.43	0.65	0.00	0.00	-A	+B
79	47	0.50	0.58	0.00	0.00	-A	+C
81	48	0.54	0.62	0.00	0.00	-A	+A
217	49	0.33	0.65	0.00	0.00	-A	+A
222	50	0.46	0.68	0.00	0.00	-C	+C
223	51	0.29	0.67	0.00	0.00	-A	+A
226	52	0.33	0.69	0.00	0.00	-A	+A
343	53	0.36	0.59	0.00	0.00	-A	-A
298	54	0.40	0.69	0.00	0.01	-A	+A
241	55	0.33	0.68	0.00	0.00	-A	+A
242	56	0.41	0.77	0.00	0.00	-A	+A
243	57	0.40	0.70	0.00	0.00	-A	+A
244	58	0.42	0.79	0.00	0.00	-A	-A
286	59	0.40	0.68	0.00	0.00	-C	+A
287	60	0.24	0.42	0.00	0.01	-C	+A

Grade Band 3–5 Science Classical Item Statistics

ITS Item ID	Item Position	Adjusted Biserial/ Polyserial	Average Score	Omit	Access Limitation	DIF	
						Female vs. Male	Black vs. White
887	1	0.60	0.73	0.00	0.02	+A	-A
888	2	0.46	0.54	0.00	0.04	-A	-A
889	3	0.52	0.61	0.00	0.05	+A	-A
890	4	0.53	0.54	0.00	0.05	-A	-A
891	5	0.46	0.53	0.00	0.05	-A	+A
808	6	0.56	0.71	0.00	0.06	+B	-B
816	7	0.38	0.57	0.00	0.01	+A	+A
815	8	0.49	0.43	0.00	0.01	-A	+A
809	9	0.45	0.42	0.00	0.01	-A	+A
817	10	0.36	0.42	0.00	0.01	-A	+A
767	11	0.68	0.83	0.00	0.01	-A	-A
768	12	0.69	0.58	0.00	0.00	+A	-A
769	13	0.64	0.73	0.00	0.00	-A	-A
770	14	0.73	0.36	0.00	0.00	+A	+A
771	15	0.52	0.51	0.00	0.00	+A	-A
1021	16	0.67	0.76	0.00	0.01	-B	-A
865	17	0.53	0.56	0.00	0.00	-A	+A
866	18	0.35	0.58	0.00	0.00	+A	-A
867	19	0.49	0.56	0.01	0.00	-A	+A
868	20	0.53	0.52	0.01	0.00	-A	-A
869	21	0.46	0.59	0.00	0.01	-A	-A
829	22	0.41	0.47	0.00	0.00	+A	-A
830	23	0.48	0.64	0.00	0.00	-A	-A
831	24	0.51	0.52	0.00	0.01	-A	-A
833	25	0.55	0.58	0.00	0.00	-A	+A
834	26	0.54	0.47	0.00	0.00	+A	+A
803	27	0.08	0.47	0.00	0.01	-A	+A
804	28	0.38	0.80	0.00	0.00	-A	-A
806	29	0.19	0.66	0.00	0.00	+A	+A
807	30	0.15	0.54	0.00	0.01	-A	-A
755	31	0.20	0.70	0.00	0.00	+A	+A
756	32	0.20	0.74	0.00	0.00	+A	-A
758	33	0.34	0.58	0.00	0.00	+A	+A
760	34	0.30	0.74	0.00	0.00	-B	+A
911	35	0.29	0.82	0.00	0.02	-A	+A
766	36	0.25	0.55	0.00	0.00	+A	-A
745	37	0.29	0.85	0.00	0.00	-A	-A
748	38	0.35	0.61	0.00	0.00	-A	-A
751	39	0.25	0.66	0.00	0.00	-A	-A
749	40	0.38	0.63	0.00	0.01	+A	+A

940	41	0.44	0.74	0.00	0.00	+A	-A

ITS Item ID	Item Position	Adjusted Biserial/ Polyserial	Average Score	Omit	Access Limitation	DIF	
						Female vs. Male	Black vs. White
941	42	0.29	0.63	0.00	0.00	+A	-A
942	43	0.33	0.71	0.00	0.00	-A	+A
977	44	0.33	0.75	0.00	0.01	-A	+A
943	45	0.33	0.71	0.00	0.00	-B	+A
709	46	0.25	0.55	0.00	0.00	-A	+A
711	47	0.37	0.76	0.00	0.01	-A	+A
712	48	0.39	0.68	0.00	0.01	-A	+A
713	49	0.31	0.83	0.00	0.00	-A	+A
945	50	0.00	0.63	0.00	0.00	-A	-A
947	51	0.33	0.71	0.00	0.01	+A	+A
948	52	0.16	0.74	0.00	0.01	-A	+A
949	53	0.20	0.54	0.00	0.00	+A	+A
950	54	0.29	0.64	0.00	0.00	-A	-A
699	55	0.14	0.66	0.00	0.00	+A	+A
700	56	0.10	0.62	0.00	0.01	-A	-A
702	57	0.03	0.82	0.00	0.00	+A	-A
703	58	0.02	0.42	0.00	0.00	-A	-A

Grade Band 6–8 Science Classical Item Statistics

ITS Item ID	Item Position	Adjusted Biserial/ Polyserial	Average Score	Omit	Access Limitation	DIF	
						Female vs. Male	Black vs. White
787	1	0.48	0.75	0.00	0.00	+A	-A
789	2	0.42	0.46	0.00	0.00	-A	-A
790	3	0.53	0.44	0.00	0.01	-A	-A
791	4	0.44	0.32	0.00	0.00	-A	+A
793	5	0.49	0.43	0.02	0.00	+A	-A
794	6	0.43	0.37	0.02	0.00	-A	-A
840	7	0.58	0.68	0.02	0.01	+A	+A
841	8	0.52	0.35	0.02	0.01	-A	-A
843	9	0.51	0.46	0.00	0.00	-B	+A
844	10	0.56	0.41	0.00	0.00	-A	+A
845	11	0.51	0.49	0.00	0.00	+A	+A
870	12	0.67	0.77	0.00	0.00	-A	-A
871	13	0.49	0.56	0.00	0.01	+A	+A
872	14	0.42	0.51	0.00	0.00	-A	-A
873	15	0.47	0.48	0.00	0.00	-A	+A
874	16	0.53	0.52	0.00	0.01	-A	+A
875	17	0.43	0.43	0.00	0.00	+A	+A
1021	18	0.71	0.75	0.00	0.01	+A	+A
865	19	0.53	0.51	0.00	0.02	+A	-A
866	20	0.42	0.59	0.00	0.00	-A	-A
867	21	0.51	0.49	0.00	0.00	-A	+A
868	22	0.47	0.47	0.00	0.00	-A	-A
869	23	0.59	0.57	0.00	0.00	-A	-A
716	24	0.70	0.80	0.00	0.01	+A	+A
719	25	0.53	0.51	0.00	0.00	-A	+A
725	26	0.66	0.52	0.00	0.00	+A	-A
728	27	0.57	0.51	0.00	0.00	+A	+A
722	28	0.62	0.51	0.00	0.01	+A	-A
965	29	0.48	0.78	0.00	0.00	+A	+A
966	30	0.53	0.82	0.00	0.00	+A	+A
967	31	0.52	0.79	0.00	0.00	+A	-A
968	32	0.55	0.65	0.00	0.00	-A	+A
969	33	0.50	0.74	0.00	0.00	-A	+B
846	34	0.49	0.89	0.00	0.00	-A	+A
847	35	0.46	0.81	0.00	0.00	+A	+A
848	36	0.38	0.73	0.00	0.00	-A	-A
849	37	0.30	0.71	0.00	0.00	+A	+A
755	38	0.35	0.77	0.00	0.00	+A	+A
756	39	0.33	0.78	0.00	0.00	+A	+A
758	40	0.29	0.66	0.00	0.00	-A	+A

760	41	0.33	0.78	0.00	0.00	-A	+A

ITS Item ID	Item Position	Adjusted Biserial/ Polyserial	Average Score	Omit	Access Limitation	DIF	
						Female vs. Male	Black vs. White
911	42	0.34	0.85	0.00	0.00	+A	+A
766	43	0.21	0.56	0.00	0.01	-A	+A
745	44	0.37	0.86	0.00	0.00	-A	-A
748	45	0.31	0.63	0.00	0.00	-A	+A
751	46	0.31	0.67	0.00	0.00	-A	-A
749	47	0.45	0.68	0.00	0.01	-A	-A
1009	48	0.38	0.89	0.00	0.00	-A	+A
1011	49	0.23	0.63	0.00	0.00	-A	+A
1010	50	0.27	0.83	0.00	0.00	-A	-A
1013	51	0.41	0.80	0.00	0.00	-A	+A
945	52	0.02	0.64	0.00	0.00	+A	-A
947	53	0.20	0.75	0.00	0.00	+A	+A
948	54	0.24	0.79	0.00	0.00	+A	+A
949	55	0.17	0.61	0.00	0.00	-A	+B
950	56	0.27	0.69	0.00	0.00	-A	+A
699	57	0.21	0.72	0.00	0.01	-A	+A
700	58	0.19	0.70	0.00	0.02	-A	-A
702	59	0.19	0.82	0.00	0.02	-A	-A
703	60	0.09	0.45	0.00	0.02	-A	+A

Grade 10 Science Classical Item Statistics

ITS Item ID	Item Position	Adjusted Biserial/ Polyserial	Average Score	Omit	Access Limitation	DIF	
						Female vs. Male	Black vs. White
787	1	0.58	0.73	0.00	0.03	-B	-A
789	2	0.45	0.46	0.00	0.07	+A	+C
790	3	0.50	0.49	0.00	0.00	-A	+A
791	4	0.52	0.26	0.00	0.00	-A	+B
793	5	0.53	0.43	0.00	0.00	-A	+A
794	6	0.53	0.36	0.00	0.01	-B	+A
716	7	0.69	0.75	0.00	0.02	-A	-A
719	8	0.54	0.46	0.00	0.00	-A	+C
725	9	0.60	0.40	0.00	0.00	-A	+C
728	10	0.46	0.41	0.00	0.00	+A	-B
722	11	0.55	0.52	0.00	0.01	+A	+A
894	12	0.72	0.79	0.00	0.01	+A	-A
1023	13	0.63	0.63	0.00	0.02	+A	+A
895	14	0.69	0.63	0.00	0.00	+A	+A
896	15	0.67	0.55	0.00	0.00	-A	+C
898	16	0.64	0.47	0.00	0.00	+A	+A
957	17	0.43	0.71	0.00	0.01	-A	+A
959	18	0.53	0.50	0.00	0.01	+A	+A
958	19	0.59	0.51	0.00	0.02	+A	-A
960	20	0.58	0.54	0.00	0.00	-A	+A
963	21	0.63	0.61	0.00	0.00	+A	-A
965	22	0.44	0.69	0.00	0.00	+A	+A
966	23	0.62	0.65	0.00	0.00	+A	-A
967	24	0.57	0.60	0.00	0.01	+A	+A
968	25	0.72	0.54	0.00	0.00	+A	-A
969	26	0.58	0.54	0.00	0.00	-A	-A
970	27	0.42	0.80	0.00	0.00	+A	-A
971	28	0.29	0.59	0.00	0.00	+A	+A
972	29	0.21	0.67	0.00	0.01	-A	+A
973	30	0.30	0.62	0.00	0.00	+A	+A
877	31	0.24	0.84	0.00	0.00	+A	+A
878	32	0.15	0.43	0.00	0.00	-A	+A
879	33	0.38	0.69	0.00	0.01	-A	+C
880	34	0.16	0.76	0.00	0.00	+A	+A
881	35	0.39	0.72	0.00	0.00	-A	+A
732	36	0.27	0.85	0.00	0.00	-A	+A
738	37	0.30	0.73	0.00	0.00	-A	+A
741	38	0.29	0.72	0.00	0.00	-A	+A
1022	39	0.38	0.86	0.00	0.01	-A	+A
743	40	0.36	0.81	0.00	0.00	-A	-A

785	41	0.24	0.67	0.00	0.00	+A	+A

ITS Item ID	Item Position	Adjusted Biserial/ Polyserial	Average Score	Omit	Access Limitation	DIF	
						Female vs. Male	Black vs. White
786	42	0.21	0.69	0.00	0.00	+A	+B
788	43	0.40	0.64	0.00	0.00	-A	+A
792	44	0.34	0.78	0.00	0.00	-A	+A
1009	45	0.28	0.87	0.00	0.00	+A	-A
1011	46	0.21	0.64	0.00	0.00	+A	+A
1010	47	0.23	0.86	0.00	0.00	+A	+A
1013	48	0.00	0.81	0.00	0.00	-A	+A
1003	49	0.18	0.84	0.00	0.00	+A	+A
1004	50	0.09	0.43	0.00	0.00	-A	+A
1005	51	0.33	0.60	0.00	0.00	+A	-A
1006	52	0.19	0.58	0.00	0.01	-A	+A
994	53	0.15	0.84	0.00	0.00	-A	+A
995	54	0.16	0.82	0.00	0.00	-A	-A
996	55	0.11	0.74	0.00	0.00	-A	-A
997	56	0.16	0.53	0.00	0.00	-A	-A

Grade Band 3–5 Social Studies Field Test Classical Item Statistics

ITS Item ID	Item Position	Adjusted Biserial/ Polyserial	Average Score	Omit	Access Limitation	DIF	
						Female vs. Male	Black vs. White
1148	1	0.55	0.65	0.00	0.00	+A	-A
1060	2	0.46	0.52	0.00	0.01	-A	+A
1061	3	0.40	0.40	0.00	0.01	+A	+A
1063	4	0.44	0.56	0.04	0.01	-A	-A
1062	5	0.43	0.35	0.00	0.00	-A	-A
1083	6	0.56	0.68	0.00	0.00	-A	-A
1084	7	0.48	0.51	0.00	0.00	-A	+A
1085	8	0.44	0.51	0.00	0.00	-C	-A
1086	9	0.48	0.51	0.00	0.00	-A	+A
1095	10	0.51	0.66	0.00	0.00	+A	-A
1096	11	0.51	0.58	0.00	0.00	-A	+A
1098	12	0.51	0.33	0.00	0.00	-A	-A
1100	13	0.62	0.48	0.00	0.00	+A	+A
1175	14	0.53	0.64	0.00	0.00	-A	-A
1176	15	0.52	0.40	0.00	0.00	-A	-A
1177	16	0.47	0.43	0.00	0.00	+A	+A
1178	17	0.48	0.36	0.00	0.00	+A	-A
1131	18	0.54	0.78	0.00	0.00	-A	-A
1133	19	0.52	0.63	0.00	0.00	+A	-A
1134	20	0.54	0.62	0.00	0.01	+A	-A
1135	21	0.54	0.58	0.00	0.00	+A	-A
1027	22	0.41	0.72	0.00	0.00	+C	-A
1032	23	0.48	0.65	0.00	0.00	+B	+A
1034	24	0.50	0.62	0.01	0.00	+A	-A
1033	25	0.52	0.64	0.00	0.00	+A	-A
1166	26	0.49	0.60	0.00	0.00	+A	+A
1167	27	0.51	0.66	0.00	0.00	+A	-A
1168	28	0.59	0.63	0.00	0.00	+A	-A
1169	29	0.51	0.57	0.00	0.00	-A	+A
1101	30	0.28	0.56	0.00	0.00	+B	-A
1102	31	0.26	0.49	0.00	0.00	+A	+C
1103	32	0.25	0.54	0.00	0.00	-A	-A
1104	33	0.32	0.49	0.00	0.00	-A	+A
1197	34	0.38	0.52	0.00	0.00	-A	-A
1199	35	0.32	0.46	0.00	0.00	-A	+A
1200	36	0.02	0.62	0.00	0.00	-A	+A
1196	37	0.24	0.61	0.00	0.00	+A	+A
1125	38	0.35	0.52	0.00	0.00	+A	+A
1126	39	0.10	0.74	0.00	0.00	+A	+A
1127	40	0.34	0.67	0.00	0.00	+A	+A

1128	41	0.35	0.74	0.00	0.00	+A	-A

ITS Item ID	Item Position	Adjusted Biserial/ Polyserial	Average Score	Omit	Access Limitation	DIF	
						Female vs. Male	Black vs. White
1129	42	0.43	0.71	0.00	0.01	-A	-A
1105	43	0.42	0.66	0.00	0.00	-A	-A
1116	44	0.48	0.66	0.00	0.00	+A	+A
1118	45	0.31	0.63	0.00	0.00	+A	+A
1120	46	-0.04	0.66	0.00	0.01	+A	-A
1157	47	0.43	0.67	0.00	0.00	-A	+A
1158	48	0.19	0.68	0.00	0.00	-A	-A
1159	49	0.09	0.55	0.00	0.00	-A	-A
1160	50	0.45	0.63	0.00	0.00	-A	+A
1174	51	0.27	0.81	0.00	0.00	+A	-A
1171	52	0.38	0.85	0.00	0.00	+A	+A
1172	53	0.24	0.89	0.00	0.00	-A	-A
1173	54	0.44	0.87	0.00	0.01	+A	-A
1087	55	0.13	0.57	0.00	0.00	-A	-A
1088	56	0.27	0.44	0.00	0.00	-A	+A
1089	57	0.08	0.53	0.00	0.00	-A	+A
1090	58	0.11	0.51	0.00	0.00	-A	-A
1065	59	0.19	0.76	0.00	0.00	+A	+A
1066	60	0.06	0.55	0.00	0.00	-A	+A
1071	61	0.12	0.50	0.00	0.00	+A	-A
1078	62	0.25	0.67	0.00	0.01	-A	+A
1093	63	0.13	0.58	0.00	0.00	+A	+A
1092	64	0.10	0.67	0.00	0.00	-C	-A
1094	65	0.08	0.58	0.00	0.00	-C	-A
1091	66	0.17	0.66	0.00	0.00	-A	-A
1077	67	0.26	0.86	0.00	0.00	+A	-A
1079	68	0.11	0.72	0.00	0.00	-A	-A
1080	69	0.10	0.77	0.00	0.00	-A	-A
1081	70	0.20	0.81	0.00	0.00	-A	-A
1108	71	0.05	0.56	0.00	0.00	-A	-A
1109	72	0.14	0.65	0.00	0.00	+A	+B
1110	73	0.19	0.59	0.00	0.00	-A	-A
1112	74	0.19	0.71	0.00	0.00	+A	-B
1207	75	0.21	0.61	0.00	0.00	+A	+A
1208	76	0.01	0.64	0.00	0.03	-A	+A
1130	77	-0.04	0.55	0.00	0.00	-A	-A
1137	78	0.13	0.52	0.00	0.00	+A	-A
1139	79	0.13	0.44	0.00	0.00	-A	-A

1140	80	0.07	0.61	0.00	0.00	-A	+A
1141	81	0.01	0.60	0.00	0.00	-A	-A
1142	82	0.16	0.39	0.00	0.01	-A	-A

Grade Band 6–8 Social Studies Field Test Classical Item Statistics

ITS Item ID	Item Position	Adjusted Biserial/ Polyserial	Average Score	Omit	Access Limitation	DIF	
						Female vs. Male	Black vs. White
1148	1	0.41	0.62	0.00	0.03	+B	-A
1060	2	0.31	0.49	0.00	0.01	+A	+A
1061	3	0.42	0.36	0.00	0.01	+A	-A
1063	4	0.37	0.53	0.04	0.01	-A	+A
1062	5	0.40	0.37	0.00	0.03	+A	+A
1083	6	0.50	0.69	0.00	0.01	+A	+A
1084	7	0.49	0.49	0.00	0.00	-A	+A
1085	8	0.42	0.53	0.00	0.00	+A	+A
1086	9	0.48	0.48	0.00	0.01	-A	-A
1049	10	0.57	0.64	0.00	0.00	+A	-A
1051	11	0.43	0.42	0.00	0.00	-A	+A
1050	12	0.43	0.37	0.00	0.00	+A	+A
1053	13	0.40	0.33	0.00	0.00	+A	-A
1183	14	0.53	0.65	0.00	0.00	-A	+A
1188	15	0.40	0.42	0.00	0.00	-A	+A
1184	16	0.42	0.42	0.00	0.00	-A	-A
1185	17	0.48	0.40	0.00	0.00	+A	-A
1106	18	0.53	0.74	0.00	0.00	+A	-A
1107	19	0.50	0.63	0.00	0.00	+A	+A
1115	20	0.42	0.56	0.00	0.00	+A	+A
1114	21	0.43	0.45	0.00	0.00	+A	+A
1027	22	0.37	0.72	0.00	0.00	+C	-A
1032	23	0.43	0.60	0.00	0.00	+A	+A
1034	24	0.47	0.62	0.02	0.00	+A	-A
1033	25	0.36	0.61	0.00	0.00	+A	+A
1166	26	0.56	0.59	0.00	0.00	+A	+A
1167	27	0.54	0.60	0.00	0.01	+A	-A
1168	28	0.54	0.62	0.00	0.01	-A	-A
1169	29	0.52	0.57	0.00	0.00	+A	-A
1149	30	0.31	0.58	0.00	0.00	-A	-A
1150	31	0.45	0.59	0.00	0.00	+A	+A
1152	32	0.23	0.72	0.00	0.00	+A	+A
1153	33	0.18	0.66	0.00	0.00	-A	+A
1101	34	0.37	0.58	0.00	0.00	+A	+A
1102	35	0.33	0.49	0.01	0.00	-A	+A
1103	36	0.26	0.51	0.00	0.00	-A	+A
1104	37	0.44	0.51	0.01	0.01	-A	-A
1059	38	0.35	0.76	0.00	0.00	+A	-A
1067	39	0.39	0.62	0.00	0.00	+A	+A
1068	40	0.40	0.58	0.00	0.00	-A	-A

1070	41	0.39	0.68	0.00	0.00	+A	+A

ITS Item ID	Item Position	Adjusted Biserial/ Polyserial	Average Score	Omit	Access Limitation	DIF	
						Female vs. Male	Black vs. White
1143	42	0.47	0.82	0.00	0.00	-A	+A
1144	43	0.26	0.76	0.00	0.00	-A	+A
1145	44	0.32	0.49	0.00	0.00	-A	-A
1146	45	0.37	0.79	0.00	0.00	-A	-A
1147	46	0.30	0.75	0.00	0.01	-A	+B
1028	47	0.25	0.54	0.00	0.00	+A	-A
1029	48	0.31	0.53	0.00	0.00	-A	-A
1030	49	0.20	0.58	0.00	0.00	+A	-A
1031	50	0.27	0.43	0.00	0.00	-A	+A
1174	51	0.31	0.84	0.00	0.00	-A	+A
1171	52	0.35	0.85	0.00	0.00	+A	-A
1172	53	0.29	0.90	0.00	0.01	+A	-A
1173	54	0.27	0.88	0.00	0.01	+A	+B
1087	55	0.20	0.66	0.00	0.00	+A	-A
1088	56	0.27	0.51	0.00	0.00	-A	+A
1089	57	0.24	0.59	0.00	0.00	-A	-A
1090	58	0.16	0.55	0.00	0.00	-A	-A
1093	59	0.18	0.59	0.00	0.00	+A	+A
1092	60	0.18	0.71	0.00	0.00	-C	-A
1094	61	0.11	0.60	0.00	0.00	-A	-A
1091	62	0.28	0.65	0.00	0.00	+A	-A
1077	63	0.23	0.84	0.00	0.00	-A	+A
1079	64	0.17	0.70	0.00	0.00	-A	-A
1080	65	0.11	0.79	0.00	0.00	-A	-A
1081	66	0.18	0.84	0.00	0.01	+A	+A
1055	67	0.22	0.99	0.00	0.00	-A	+A
1056	68	0.23	0.70	0.00	0.00	-A	+A
1057	69	0.11	0.48	0.00	0.00	-A	+A
1058	70	0.22	0.55	0.00	0.00	-A	+A
1190	71	0.23	0.65	0.00	0.00	+A	+A
1191	72	0.29	0.75	0.00	0.00	+A	+A
1209	73	0.08	0.70	0.00	0.00	+A	+A
1193	74	0.12	0.64	0.00	0.00	+C	-A
1192	75	0.06	0.68	0.00	0.00	-A	-A
1119	76	0.16	0.82	0.00	0.00	+B	+A
1121	77	0.24	0.62	0.00	0.00	-A	+A
1122	78	0.05	0.68	0.00	0.00	-A	+A
1123	79	0.12	0.58	0.00	0.00	+A	-A

1124	80	0.04	0.66	0.00	0.01	+A	+A

Grade Band 3–5 English Language Arts: WINSTEPS Item Statistics

ENTRY	MEASURE	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	NAME
1	-0.77	394	676	0.06	1.10	1.43	1.21	2.23	ITS_item_607
2	-0.77	394	218	0.11	1.04	0.80	1.05	0.67	ITS_item_672
3	-2.10	394	306	0.14	0.92	-0.93	0.94	-0.49	ITS_item_294
4	-0.32	394	364	0.08	1.18	2.89	1.21	2.42	ITS_item_295
5	-2.01	394	301	0.14	0.94	-0.80	0.98	-0.12	ITS_item_296
6	-0.01	394	302	0.07	1.10	1.84	1.16	1.22	ITS_item_297
7	-1.27	665	1340	0.05	1.45	6.61	1.83	8.35	ITS_item_667
8	-1.42	665	443	0.09	1.05	1.17	1.21	3.03	ITS_item_668
9	-2.13	665	515	0.11	0.82	-3.07	1.02	0.22	ITS_item_331
10	-2.26	665	527	0.11	0.80	-3.19	0.73	-2.85	ITS_item_329
11	-2.15	665	517	0.11	0.82	-2.95	0.75	-2.78	ITS_item_333
12	-1.48	665	449	0.09	0.88	-2.61	0.87	-1.97	ITS_item_344
13	-0.02	665	501	0.05	1.16	3.63	1.22	2.25	ITS_item_355
14	-0.82	631	1370	0.05	0.90	-1.50	1.05	0.54	ITS_item_669
15	-0.61	630	392	0.09	1.07	1.93	1.08	1.31	ITS_item_427
16	0.28	630	538	0.05	1.07	1.80	1.17	1.78	ITS_item_430
17	-0.06	630	645	0.06	1.05	1.23	1.05	0.86	ITS_item_428
18	0.27	630	542	0.05	1.18	4.38	1.25	2.53	ITS_item_429
19	-0.18	630	698	0.05	1.08	1.77	1.23	2.68	ITS_item_431
20	-0.49	645	1225	0.05	0.97	-0.53	0.97	-0.41	ITS_item_370
21	0.34	636	526	0.05	1.16	3.86	1.17	1.85	ITS_item_549
22	0.12	636	603	0.06	1.04	0.90	1.04	0.63	ITS_item_550
23	-0.08	636	674	0.05	1.10	2.36	1.26	2.94	ITS_item_551
24	0.01	631	635	0.05	1.14	3.44	1.33	3.59	ITS_item_552
25	0.44	636	491	0.05	1.15	3.57	1.22	2.21	ITS_item_553
26	-0.51	633	383	0.09	0.94	-1.78	0.96	-0.64	ITS_item_554
27	-1.98	1034	880	0.09	0.93	-1.19	0.82	-1.92	ITS_item_597
28	-0.61	1034	663	0.07	0.85	-5.57	0.80	-4.85	ITS_item_601
29	0.09	1034	511	0.07	0.96	-1.88	0.96	-0.95	ITS_item_609
30	-1.69	1034	845	0.09	0.84	-3.02	0.78	-2.74	ITS_item_608
31	-1.20	1034	772	0.08	0.91	-2.17	0.86	-2.25	ITS_item_610
32	0.68	1010	379	0.07	1.04	1.55	1.01	0.27	ITS_item_611
33	0.05	1290	1640	0.04	1.04	1.18	1.11	1.55	ITS_item_64
34	-0.14	1290	1707	0.04	0.89	-3.23	0.82	-3.45	ITS_item_67
35	-0.29	1290	1852	0.04	0.98	-0.45	0.86	-1.67	ITS_item_68
36	-0.29	1290	871	0.06	0.90	-3.97	0.77	-4.63	ITS_item_69
37	0.44	1290	1381	0.04	0.95	-1.72	0.88	-1.76	ITS_item_70
38	-0.51	791	1340	0.06	0.89	-1.86	0.72	-1.98	ITS_item_484
39	-0.67	791	1322	0.07	0.87	-2.16	0.71	-3.04	ITS_item_483
40	-0.48	791	1338	0.06	0.93	-1.14	0.76	-1.58	ITS_item_485

41	-0.10	791	1214	0.05	0.83	-3.79	0.61	-3.75	ITS_item_496
42	-0.48	791	1333	0.06	0.95	-0.73	0.83	-1.15	ITS_item_486
ENTRY	MEASURE	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	NAME
43	-0.07	764	547	0.09	1.00	0.04	0.97	-0.34	ITS_item_587
44	-0.12	764	554	0.09	0.97	-0.87	0.85	-2.03	ITS_item_588
45	-0.02	764	541	0.09	0.93	-1.99	0.81	-2.78	ITS_item_603
46	0.11	764	523	0.08	0.98	-0.69	0.94	-0.85	ITS_item_618
47	-0.13	718	1142	0.06	0.99	-0.26	0.76	-2.02	ITS_item_133
48	0.48	718	939	0.05	0.89	-2.65	0.78	-2.63	ITS_item_134
49	0.34	718	967	0.06	0.80	-4.86	0.66	-5.24	ITS_item_135
50	-0.44	718	1231	0.07	0.92	-1.23	0.88	-0.69	ITS_item_136
51	0.83	718	806	0.05	1.16	3.47	1.24	3.48	ITS_item_137
52	0.31	1420	2058	0.04	0.86	-4.49	0.76	-3.69	ITS_item_469
53	0.04	1420	2142	0.04	0.85	-4.34	0.73	-5.26	ITS_item_425
54	-0.11	1420	2252	0.05	1.04	1.03	1.12	1.69	ITS_item_471
55	-0.12	1420	2234	0.05	0.83	-4.65	0.81	-3.02	ITS_item_424
56	1.13	1420	1491	0.04	1.23	6.83	1.25	5.20	ITS_item_686
57	0.63	1420	1825	0.04	1.36	9.90	1.53	9.25	ITS_item_472
58	-0.34	1384	2316	0.05	0.82	-4.19	0.68	-4.41	ITS_item_82
59	0.41	1384	1944	0.04	1.21	5.83	1.19	3.05	ITS_item_83
60	0.87	1384	1617	0.04	1.19	5.63	1.21	5.39	ITS_item_85
61	1.53	1383	1208	0.04	1.49	9.90	1.61	9.90	ITS_item_89
62	0.95	1384	1568	0.04	1.19	5.53	1.20	5.35	ITS_item_95
63	0.37	609	889	0.06	0.72	-6.22	0.54	-4.40	ITS_item_487
64	0.39	609	885	0.06	0.80	-4.26	0.64	-3.19	ITS_item_488
65	0.57	608	807	0.06	1.20	3.92	1.37	4.24	ITS_item_493
66	-0.07	609	995	0.07	0.87	-2.23	0.68	-2.47	ITS_item_489
67	0.22	609	918	0.06	1.15	2.67	1.66	4.82	ITS_item_573
68	0.57	609	800	0.06	0.94	-1.15	0.87	-2.01	ITS_item_574

Grade Band 6–8 English Language Arts: WINSTEPS Item Statistics

ENTRY	MEASURE	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	NAME
7	-1.27	665	1340	0.05	1.45	6.61	1.83	8.35	ITS_item_667
8	-1.42	665	443	0.09	1.05	1.17	1.21	3.03	ITS_item_668
9	-2.13	665	515	0.11	0.82	-3.07	1.02	0.22	ITS_item_331
10	-2.26	665	527	0.11	0.80	-3.19	0.73	-2.85	ITS_item_329
11	-2.15	665	517	0.11	0.82	-2.95	0.75	-2.78	ITS_item_333
12	-1.48	665	449	0.09	0.88	-2.61	0.87	-1.97	ITS_item_344
13	-0.02	665	501	0.05	1.16	3.63	1.22	2.25	ITS_item_355
27	-1.98	1034	880	0.09	0.93	-1.19	0.82	-1.92	ITS_item_597
28	-0.61	1034	663	0.07	0.85	-5.57	0.80	-4.85	ITS_item_601
29	0.09	1034	511	0.07	0.96	-1.88	0.96	-0.95	ITS_item_609
30	-1.69	1034	845	0.09	0.84	-3.02	0.78	-2.74	ITS_item_608
31	-1.20	1034	772	0.08	0.91	-2.17	0.86	-2.25	ITS_item_610
32	0.68	1010	379	0.07	1.04	1.55	1.01	0.27	ITS_item_611
33	0.05	1290	1640	0.04	1.04	1.18	1.11	1.55	ITS_item_64
34	-0.14	1290	1707	0.04	0.89	-3.23	0.82	-3.45	ITS_item_67
35	-0.29	1290	1852	0.04	0.98	-0.45	0.86	-1.67	ITS_item_68
36	-0.29	1290	871	0.06	0.90	-3.97	0.77	-4.63	ITS_item_69
37	0.44	1290	1381	0.04	0.95	-1.72	0.88	-1.76	ITS_item_70
52	0.31	1420	2058	0.04	0.86	-4.49	0.76	-3.69	ITS_item_469
53	0.04	1420	2142	0.04	0.85	-4.34	0.73	-5.26	ITS_item_425
54	-0.11	1420	2252	0.05	1.04	1.03	1.12	1.69	ITS_item_471
55	-0.12	1420	2234	0.05	0.83	-4.65	0.81	-3.02	ITS_item_424
56	1.13	1420	1491	0.04	1.23	6.83	1.25	5.20	ITS_item_686
57	0.63	1420	1825	0.04	1.36	9.90	1.53	9.25	ITS_item_472
58	-0.34	1384	2316	0.05	0.82	-4.19	0.68	-4.41	ITS_item_82
59	0.41	1384	1944	0.04	1.21	5.83	1.19	3.05	ITS_item_83
60	0.87	1384	1617	0.04	1.19	5.63	1.21	5.39	ITS_item_85
61	1.53	1383	1208	0.04	1.49	9.90	1.61	9.90	ITS_item_89
62	0.95	1384	1568	0.04	1.19	5.53	1.20	5.35	ITS_item_95
69	-0.76	366	618	0.06	1.26	3.50	1.50	4.58	ITS_item_680
70	-1.73	366	267	0.13	0.90	-1.46	1.00	0.06	ITS_item_631
71	-0.12	366	155	0.12	1.13	2.99	1.15	1.61	ITS_item_632
72	-0.02	366	291	0.08	1.08	1.25	1.04	0.41	ITS_item_634
73	-0.16	366	311	0.08	1.06	1.02	1.05	0.60	ITS_item_657
74	0.29	353	124	0.12	1.11	2.28	1.19	1.74	ITS_item_664
75	-0.21	366	316	0.07	1.03	0.49	1.17	1.30	ITS_item_648
76	-0.81	460	938	0.06	1.14	2.03	1.48	4.10	ITS_item_681
77	-0.21	460	500	0.07	1.15	2.64	1.11	1.13	ITS_item_50
78	0.13	460	420	0.06	1.08	1.55	1.07	0.73	ITS_item_52
79	-0.05	460	461	0.07	0.94	-1.11	0.88	-1.56	ITS_item_55

80	-0.47	460	562	0.07	0.95	-0.91	0.83	-1.63	ITS_item_53

ENTRY	MEASURE	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	NAME
81	0.21	460	406	0.07	1.08	1.53	1.07	0.91	ITS_item_116
82	-0.42	820	2148	0.05	0.81	-2.67	0.50	-3.24	ITS_item_279
83	-0.25	820	2118	0.05	0.84	-2.24	0.67	-1.63	ITS_item_280
84	-0.14	820	2066	0.05	0.79	-3.23	0.44	-3.54	ITS_item_281
85	-0.22	820	2066	0.05	0.78	-3.53	0.55	-2.99	ITS_item_282
86	0.04	820	1934	0.04	0.78	-4.07	0.67	-2.80	ITS_item_285
87	0.02	820	1931	0.04	0.85	-2.85	0.87	-0.94	ITS_item_288
88	-0.41	920	1526	0.06	0.92	-1.38	0.71	-2.60	ITS_item_498
89	0.48	920	1171	0.05	1.06	1.46	1.08	1.45	ITS_item_500
90	0.12	920	1341	0.05	1.13	2.77	1.34	3.55	ITS_item_501
91	0.80	920	1056	0.05	1.06	1.51	1.02	0.31	ITS_item_502
92	0.70	915	1092	0.05	1.01	0.34	0.95	-0.68	ITS_item_503
93	0.14	818	1239	0.05	1.16	3.15	1.42	3.60	ITS_item_441
94	0.43	818	1123	0.05	0.89	-2.63	0.81	-2.61	ITS_item_438
95	0.01	818	1241	0.06	0.94	-1.12	0.83	-2.19	ITS_item_440
96	0.19	818	1209	0.06	0.96	-0.90	0.89	-1.32	ITS_item_439
97	-0.06	923	2296	0.05	0.84	-2.96	0.75	-3.11	ITS_item_101
98	0.21	923	2182	0.04	0.81	-3.98	0.71	-3.52	ITS_item_112
99	0.28	923	1450	0.05	0.92	-1.61	0.79	-1.90	ITS_item_114
100	0.10	923	1519	0.05	1.01	0.26	1.25	1.79	ITS_item_302
101	0.09	904	1493	0.06	0.86	-2.74	0.65	-3.16	ITS_item_161
102	0.12	904	1413	0.06	0.99	-0.24	1.04	0.51	ITS_item_162
103	0.95	904	1140	0.05	1.47	9.90	1.66	8.72	ITS_item_166
104	0.30	904	1356	0.06	0.87	-2.93	0.75	-3.78	ITS_item_182

Grade 10 English Language Arts: WINSTEPS Item Statistics

ENTRY	MEASURE	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	NAME
69	-0.76	366	618	0.06	1.26	3.50	1.50	4.58	ITS_item_680
70	-1.73	366	267	0.13	0.90	-1.46	1.00	0.06	ITS_item_631
71	-0.12	366	155	0.12	1.13	2.99	1.15	1.61	ITS_item_632
72	-0.02	366	291	0.08	1.08	1.25	1.04	0.41	ITS_item_634
73	-0.16	366	311	0.08	1.06	1.02	1.05	0.60	ITS_item_657
74	0.29	353	124	0.12	1.11	2.28	1.19	1.74	ITS_item_664
75	-0.21	366	316	0.07	1.03	0.49	1.17	1.30	ITS_item_648
88	-0.41	920	1526	0.06	0.92	-1.38	0.71	-2.60	ITS_item_498
89	0.48	920	1171	0.05	1.06	1.46	1.08	1.45	ITS_item_500
90	0.12	920	1341	0.05	1.13	2.77	1.34	3.55	ITS_item_501
91	0.80	920	1056	0.05	1.06	1.51	1.02	0.31	ITS_item_502
92	0.70	915	1092	0.05	1.01	0.34	0.95	-0.68	ITS_item_503
93	0.14	818	1239	0.05	1.16	3.15	1.42	3.60	ITS_item_441
94	0.43	818	1123	0.05	0.89	-2.63	0.81	-2.61	ITS_item_438
95	0.01	818	1241	0.06	0.94	-1.12	0.83	-2.19	ITS_item_440
96	0.19	818	1209	0.06	0.96	-0.90	0.89	-1.32	ITS_item_439
97	-0.06	923	2296	0.05	0.84	-2.96	0.75	-3.11	ITS_item_101
98	0.21	923	2182	0.04	0.81	-3.98	0.71	-3.52	ITS_item_112
99	0.28	923	1450	0.05	0.92	-1.61	0.79	-1.90	ITS_item_114
100	0.10	923	1519	0.05	1.01	0.26	1.25	1.79	ITS_item_302
101	0.09	904	1493	0.06	0.86	-2.74	0.65	-3.16	ITS_item_161
102	0.12	904	1413	0.06	0.99	-0.24	1.04	0.51	ITS_item_162
103	0.95	904	1140	0.05	1.47	9.90	1.66	8.72	ITS_item_166
104	0.30	904	1356	0.06	0.87	-2.93	0.75	-3.78	ITS_item_182
105	-0.69	87	150	0.13	1.24	1.61	1.17	0.81	ITS_item_683
106	-0.34	87	86	0.16	0.91	-0.72	0.97	-0.06	ITS_item_626
107	-0.11	87	76	0.15	0.74	-2.28	0.62	-1.61	ITS_item_627
108	0.56	86	28	0.26	1.06	0.54	1.05	0.30	ITS_item_628
109	0.98	86	22	0.28	0.94	-0.35	0.77	-0.89	ITS_item_629
110	-0.53	142	294	0.10	1.03	0.24	1.00	0.06	ITS_item_682
111	0.50	141	61	0.19	0.94	-0.90	1.03	0.31	ITS_item_432
112	-0.21	141	170	0.12	1.01	0.09	0.99	0.00	ITS_item_434
113	-0.29	141	173	0.12	0.82	-1.80	0.72	-1.87	ITS_item_435
114	-0.12	141	161	0.12	0.98	-0.14	0.96	-0.27	ITS_item_436
115	0.30	141	133	0.12	1.01	0.15	0.90	-0.54	ITS_item_437
116	0.92	141	96	0.13	1.10	0.93	0.98	-0.07	ITS_item_433
117	0.31	269	405	0.10	0.76	-3.03	0.56	-2.56	ITS_item_523
118	0.45	269	388	0.10	1.22	2.51	1.14	0.80	ITS_item_524
119	0.04	269	419	0.11	0.85	-1.66	0.70	-1.92	ITS_item_525
120	0.79	269	342	0.10	1.21	2.61	1.12	1.09	ITS_item_526

121	0.84	269	340	0.09	1.18	2.29	1.48	3.41	ITS_item_527

ENTRY	MEASURE	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	NAME
122	0.61	257	355	0.10	0.99	-0.12	0.90	-0.71	ITS_item_560
123	0.44	257	377	0.10	0.98	-0.25	0.95	-0.27	ITS_item_561
124	0.07	257	197	0.16	0.93	-0.88	0.92	-0.43	ITS_item_562
125	0.64	257	349	0.10	1.04	0.47	1.06	0.53	ITS_item_575
126	0.23	257	387	0.11	0.85	-1.80	0.75	-1.84	ITS_item_564
127	0.11	257	409	0.11	0.89	-1.16	0.76	-1.23	ITS_item_565
128	1.32	257	277	0.10	1.20	2.52	1.20	2.25	ITS_item_566
129	0.00	257	415	0.11	0.80	-2.17	0.74	-1.40	ITS_item_567
130	0.57	223	337	0.11	0.94	-0.62	0.92	-0.36	ITS_item_54
131	0.05	223	372	0.12	0.84	-1.46	0.70	-1.41	ITS_item_71
132	0.65	223	501	0.08	1.08	0.85	1.05	0.34	ITS_item_73
133	0.47	223	342	0.11	0.86	-1.50	0.66	-1.98	ITS_item_72
134	0.17	216	362	0.12	0.86	-1.19	0.63	-1.45	ITS_item_446
135	0.74	216	481	0.09	1.51	4.29	1.28	1.64	ITS_item_448
136	1.09	216	281	0.10	1.13	1.47	1.03	0.25	ITS_item_449
137	1.25	216	259	0.11	1.17	2.00	1.15	1.49	ITS_item_450
138	0.48	216	341	0.11	0.77	-2.43	0.59	-1.86	ITS_item_452
139	0.87	213	144	0.16	1.06	0.93	1.08	0.64	ITS_item_264
140	0.65	213	303	0.12	1.06	0.69	1.08	0.66	ITS_item_172
141	0.69	213	309	0.11	1.25	2.59	1.23	1.51	ITS_item_168
142	0.32	213	350	0.12	0.75	-2.39	0.49	-2.31	ITS_item_174
143	1.44	213	242	0.11	1.31	3.47	1.48	4.31	ITS_item_291
144	0.97	213	285	0.11	0.90	-1.15	0.81	-1.55	ITS_item_292

Grade Band 3–5 Mathematics: WINSTEPS Item Statistics

ENTRY	MEASURE	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	NAME
1	-1.34	724	1338	0.04	1.12	2.37	1.37	5.20	ITS_item_673
2	-1.00	724	383	0.08	1.10	3.21	1.13	2.56	ITS_item_633
3	-0.33	724	282	0.08	1.01	0.35	1.02	0.36	ITS_item_639
4	-0.88	724	364	0.08	1.11	3.63	1.15	2.92	ITS_item_640
5	-0.78	724	349	0.08	0.97	-1.17	0.94	-1.20	ITS_item_642
6	-1.30	700	1306	0.04	0.98	-0.40	1.07	0.94	ITS_item_677
7	-0.39	700	283	0.08	1.03	0.96	1.03	0.49	ITS_item_124
8	-0.85	700	350	0.08	0.92	-2.77	0.88	-2.51	ITS_item_123
9	-0.50	700	576	0.05	1.11	2.47	1.05	0.67	ITS_item_126
10	-1.11	1306	2739	0.03	1.02	0.46	1.14	2.30	ITS_item_674
11	-1.16	1306	880	0.07	0.91	-2.94	0.86	-2.95	ITS_item_641
12	-0.29	1306	657	0.06	1.03	1.60	1.03	0.77	ITS_item_645
13	-0.06	1306	595	0.06	1.00	-0.13	0.95	-1.21	ITS_item_644
14	0.09	1306	555	0.06	1.05	2.44	1.06	1.30	ITS_item_647
15	-1.23	1309	2865	0.04	0.93	-1.64	1.10	1.44	ITS_item_678
16	-0.29	1309	1336	0.04	0.99	-0.47	1.06	0.93	ITS_item_10
17	-0.52	1309	1477	0.04	0.88	-3.89	0.86	-2.95	ITS_item_11
18	-0.73	1309	779	0.06	0.93	-2.89	0.96	-0.95	ITS_item_13
19	0.28	1309	508	0.06	1.03	1.16	1.03	0.70	ITS_item_16
20	-1.45	640	476	0.10	1.00	0.09	0.91	-1.04	ITS_item_74
21	-0.65	640	382	0.09	0.99	-0.22	0.96	-0.80	ITS_item_75
22	-0.29	640	678	0.05	1.06	1.33	1.09	1.34	ITS_item_76
23	-0.35	640	698	0.05	1.06	1.43	1.11	1.50	ITS_item_77
24	0.33	813	962	0.05	1.10	2.39	1.13	1.79	ITS_item_200
25	0.48	813	893	0.06	1.12	2.80	1.13	2.56	ITS_item_211
26	-0.65	813	1320	0.06	0.90	-1.83	0.79	-1.75	ITS_item_215
27	-0.47	813	1270	0.06	0.89	-2.09	0.66	-3.19	ITS_item_218
28	-0.31	1560	2357	0.04	0.86	-4.00	0.70	-5.17	ITS_item_254
29	-0.43	1560	2501	0.04	0.95	-1.20	0.84	-1.71	ITS_item_255
30	-0.51	1560	2477	0.04	0.75	-7.09	0.58	-6.70	ITS_item_257
31	-0.16	1560	2255	0.04	0.85	-4.62	0.71	-5.60	ITS_item_256
32	-0.33	1493	2256	0.04	0.88	-3.57	0.90	-1.94	ITS_item_231
33	-0.41	1493	2416	0.04	0.98	-0.43	1.04	0.46	ITS_item_232
34	0.11	1493	1977	0.04	0.96	-1.39	0.91	-2.28	ITS_item_233
35	0.70	1493	825	0.06	1.02	1.06	1.07	1.91	ITS_item_276
36	-0.46	730	1149	0.06	1.02	0.41	1.12	1.29	ITS_item_216
37	0.08	730	993	0.06	1.03	0.67	1.27	3.56	ITS_item_227
38	0.84	730	739	0.05	1.29	6.11	1.43	7.07	ITS_item_230
39	0.42	730	877	0.06	1.25	5.36	1.29	4.60	ITS_item_313
40	0.01	1402	982	0.06	0.92	-3.10	0.83	-3.31	ITS_item_347

41	-0.21	1402	1035	0.07	0.98	-0.82	0.91	-1.44	ITS_item_349

ENTRY	MEASURE	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	NAME
42	-0.35	1402	1067	0.07	0.91	-2.99	0.79	-3.40	ITS_item_351
43	0.25	1402	920	0.06	0.91	-3.76	0.82	-4.24	ITS_item_352
44	-0.94	553	477	0.13	0.85	-1.90	0.57	-3.40	ITS_item_41
45	-0.52	553	965	0.08	0.84	-1.84	0.67	-2.07	ITS_item_37
46	-0.44	553	442	0.11	0.82	-3.04	0.68	-3.27	ITS_item_43
47	-0.34	553	941	0.08	0.89	-1.41	0.75	-1.54	ITS_item_42
48	0.60	1086	1488	0.04	1.09	2.28	0.98	-0.23	ITS_item_245
49	0.44	1086	1499	0.05	1.05	1.24	1.01	0.20	ITS_item_246
50	0.80	1086	1367	0.04	0.97	-0.72	0.95	-0.90	ITS_item_247
51	0.93	1085	1293	0.04	1.03	0.80	1.04	0.75	ITS_item_248
52	0.89	1085	1992	0.03	1.20	4.79	1.24	4.40	ITS_item_249
53	1.38	1085	1559	0.03	1.39	8.43	1.60	8.43	ITS_item_250

Grade Band 6–8 Mathematics: WINSTEPS Item Statistics

ENTRY	MEASURE	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	NAME
1	-1.34	724	1338	0.04	1.12	2.37	1.37	5.20	ITS_item_673
2	-1.00	724	383	0.08	1.10	3.21	1.13	2.56	ITS_item_633
3	-0.33	724	282	0.08	1.01	0.35	1.02	0.36	ITS_item_639
4	-0.88	724	364	0.08	1.11	3.63	1.15	2.92	ITS_item_640
5	-0.78	724	349	0.08	0.97	-1.17	0.94	-1.20	ITS_item_642
6	-1.30	700	1306	0.04	0.98	-0.40	1.07	0.94	ITS_item_677
7	-0.39	700	283	0.08	1.03	0.96	1.03	0.49	ITS_item_124
8	-0.85	700	350	0.08	0.92	-2.77	0.88	-2.51	ITS_item_123
9	-0.50	700	576	0.05	1.11	2.47	1.05	0.67	ITS_item_126
10	-1.11	1306	2739	0.03	1.02	0.46	1.14	2.30	ITS_item_674
11	-1.16	1306	880	0.07	0.91	-2.94	0.86	-2.95	ITS_item_641
12	-0.29	1306	657	0.06	1.03	1.60	1.03	0.77	ITS_item_645
13	-0.06	1306	595	0.06	1.00	-0.13	0.95	-1.21	ITS_item_644
14	0.09	1306	555	0.06	1.05	2.44	1.06	1.30	ITS_item_647
15	-1.23	1309	2865	0.04	0.93	-1.64	1.10	1.44	ITS_item_678
16	-0.29	1309	1336	0.04	0.99	-0.47	1.06	0.93	ITS_item_10
17	-0.52	1309	1477	0.04	0.88	-3.89	0.86	-2.95	ITS_item_11
18	-0.73	1309	779	0.06	0.93	-2.89	0.96	-0.95	ITS_item_13
19	0.28	1309	508	0.06	1.03	1.16	1.03	0.70	ITS_item_16
28	-0.31	1560	2357	0.04	0.86	-4.00	0.70	-5.17	ITS_item_254
29	-0.43	1560	2501	0.04	0.95	-1.20	0.84	-1.71	ITS_item_255
30	-0.51	1560	2477	0.04	0.75	-7.09	0.58	-6.70	ITS_item_257
31	-0.16	1560	2255	0.04	0.85	-4.62	0.71	-5.60	ITS_item_256
32	-0.33	1493	2256	0.04	0.88	-3.57	0.90	-1.94	ITS_item_231
33	-0.41	1493	2416	0.04	0.98	-0.43	1.04	0.46	ITS_item_232
34	0.11	1493	1977	0.04	0.96	-1.39	0.91	-2.28	ITS_item_233
35	0.70	1493	825	0.06	1.02	1.06	1.07	1.91	ITS_item_276
40	0.01	1402	982	0.06	0.92	-3.10	0.83	-3.31	ITS_item_347
41	-0.21	1402	1035	0.07	0.98	-0.82	0.91	-1.44	ITS_item_349
42	-0.35	1402	1067	0.07	0.91	-2.99	0.79	-3.40	ITS_item_351
43	0.25	1402	920	0.06	0.91	-3.76	0.82	-4.24	ITS_item_352
48	0.60	1086	1488	0.04	1.09	2.28	0.98	-0.23	ITS_item_245
49	0.44	1086	1499	0.05	1.05	1.24	1.01	0.20	ITS_item_246
50	0.80	1086	1367	0.04	0.97	-0.72	0.95	-0.90	ITS_item_247
51	0.93	1085	1293	0.04	1.03	0.80	1.04	0.75	ITS_item_248
52	0.89	1085	1992	0.03	1.20	4.79	1.24	4.40	ITS_item_249
53	1.38	1085	1559	0.03	1.39	8.43	1.60	8.43	ITS_item_250
54	-1.73	441	344	0.12	0.99	-0.15	0.88	-0.96	ITS_item_30
55	-0.02	441	395	0.07	0.95	-1.01	0.94	-0.68	ITS_item_33
56	-0.03	441	394	0.06	0.88	-2.41	0.85	-1.46	ITS_item_78

57	-0.60	441	529	0.07	1.02	0.43	0.95	-0.51	ITS_item_80

ENTRY	MEASURE	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	NAME
58	-0.82	1013	837	0.09	0.92	-1.56	0.89	-1.03	ITS_item_458
59	0.46	1013	1290	0.05	1.15	3.73	1.21	2.71	ITS_item_459
60	0.16	1013	1421	0.05	1.19	4.53	1.09	1.13	ITS_item_461
61	0.94	1015	1053	0.05	1.27	6.53	1.46	7.19	ITS_item_473
62	0.24	1013	1351	0.05	1.10	2.51	1.16	2.65	ITS_item_462
63	0.51	860	558	0.08	1.15	4.70	1.30	4.85	ITS_item_317
64	0.49	860	1172	0.05	1.01	0.19	0.93	-0.89	ITS_item_318
65	0.32	860	1205	0.05	1.02	0.52	1.01	0.12	ITS_item_321
66	0.83	860	1031	0.05	1.05	1.15	1.13	1.88	ITS_item_322
67	0.60	860	1103	0.05	0.95	-1.16	0.96	-0.71	ITS_item_320
68	0.32	576	1349	0.05	0.89	-1.79	0.93	-0.54	ITS_item_5
69	0.20	576	1408	0.05	0.78	-3.35	0.72	-2.19	ITS_item_6
70	0.37	576	1328	0.05	0.88	-1.89	0.92	-0.73	ITS_item_7
71	0.21	576	1390	0.05	0.74	-4.13	0.83	-1.29	ITS_item_8

Grade 10 Mathematics: WINSTEPS Item Statistics

ENTRY	MEASURE	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	NAME
1	-1.34	724	1338	0.04	1.12	2.37	1.37	5.20	ITS_item_673
2	-1.00	724	383	0.08	1.10	3.21	1.13	2.56	ITS_item_633
3	-0.33	724	282	0.08	1.01	0.35	1.02	0.36	ITS_item_639
4	-0.88	724	364	0.08	1.11	3.63	1.15	2.92	ITS_item_640
5	-0.78	724	349	0.08	0.97	-1.17	0.94	-1.20	ITS_item_642
6	-1.30	700	1306	0.04	0.98	-0.40	1.07	0.94	ITS_item_677
7	-0.39	700	283	0.08	1.03	0.96	1.03	0.49	ITS_item_124
8	-0.85	700	350	0.08	0.92	-2.77	0.88	-2.51	ITS_item_123
9	-0.50	700	576	0.05	1.11	2.47	1.05	0.67	ITS_item_126
10	-1.11	1306	2739	0.03	1.02	0.46	1.14	2.30	ITS_item_674
11	-1.16	1306	880	0.07	0.91	-2.94	0.86	-2.95	ITS_item_641
12	-0.29	1306	657	0.06	1.03	1.60	1.03	0.77	ITS_item_645
13	-0.06	1306	595	0.06	1.00	-0.13	0.95	-1.21	ITS_item_644
14	0.09	1306	555	0.06	1.05	2.44	1.06	1.30	ITS_item_647
15	-1.23	1309	2865	0.04	0.93	-1.64	1.10	1.44	ITS_item_678
16	-0.29	1309	1336	0.04	0.99	-0.47	1.06	0.93	ITS_item_10
17	-0.52	1309	1477	0.04	0.88	-3.89	0.86	-2.95	ITS_item_11
18	-0.73	1309	779	0.06	0.93	-2.89	0.96	-0.95	ITS_item_13
19	0.28	1309	508	0.06	1.03	1.16	1.03	0.70	ITS_item_16
58	-0.82	1013	837	0.09	0.92	-1.56	0.89	-1.03	ITS_item_458
59	0.46	1013	1290	0.05	1.15	3.73	1.21	2.71	ITS_item_459
60	0.16	1013	1421	0.05	1.19	4.53	1.09	1.13	ITS_item_461
61	0.94	1015	1053	0.05	1.27	6.53	1.46	7.19	ITS_item_473
62	0.24	1013	1351	0.05	1.10	2.51	1.16	2.65	ITS_item_462
63	0.51	860	558	0.08	1.15	4.70	1.30	4.85	ITS_item_317
64	0.49	860	1172	0.05	1.01	0.19	0.93	-0.89	ITS_item_318
65	0.32	860	1205	0.05	1.02	0.52	1.01	0.12	ITS_item_321
66	0.83	860	1031	0.05	1.05	1.15	1.13	1.88	ITS_item_322
67	0.60	860	1103	0.05	0.95	-1.16	0.96	-0.71	ITS_item_320
72	0.03	153	157	0.11	1.00	-0.03	0.91	-0.54	ITS_item_19
73	-0.44	153	190	0.12	0.97	-0.31	0.90	-0.81	ITS_item_15
74	0.12	153	150	0.11	1.20	2.23	1.21	1.49	ITS_item_22
75	0.79	153	108	0.13	1.14	1.39	1.16	1.33	ITS_item_692
76	0.44	153	123	0.11	1.44	4.49	1.70	3.49	ITS_item_25
77	-0.15	247	183	0.15	0.97	-0.47	0.89	-0.74	ITS_item_408
78	-0.23	247	186	0.16	0.99	-0.08	0.87	-0.84	ITS_item_409
79	-0.06	247	179	0.15	0.99	-0.15	0.90	-0.71	ITS_item_410
80	0.10	247	172	0.15	0.89	-1.85	0.78	-1.80	ITS_item_411
81	-0.15	240	384	0.10	0.88	-1.24	0.67	-1.62	ITS_item_528
82	0.12	240	356	0.10	0.94	-0.72	0.85	-0.80	ITS_item_530

83	-0.27	240	378	0.11	0.90	-1.01	0.84	-0.98	ITS_item_529

ENTRY	MEASURE	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	NAME
84	0.07	240	170	0.15	0.96	-0.65	0.94	-0.40	ITS_item_539
85	0.86	240	268	0.09	1.01	0.23	1.10	0.89	ITS_item_537
86	0.37	208	279	0.11	0.93	-0.86	0.89	-1.02	ITS_item_35
87	0.74	208	393	0.07	1.29	3.13	1.19	1.16	ITS_item_44
88	0.64	208	396	0.08	1.05	0.55	0.95	-0.31	ITS_item_45
89	0.96	208	350	0.08	1.17	1.90	1.14	1.14	ITS_item_79
90	0.79	208	250	0.10	0.98	-0.17	1.11	0.96	ITS_item_81
91	0.55	202	129	0.16	1.08	1.27	1.10	0.84	ITS_item_217
92	0.40	202	135	0.16	0.98	-0.25	0.94	-0.45	ITS_item_222
93	0.45	202	133	0.16	1.09	1.44	1.04	0.35	ITS_item_223
94	0.34	202	137	0.16	0.98	-0.33	0.88	-0.94	ITS_item_226
95	0.93	202	230	0.10	1.41	4.64	1.50	3.23	ITS_item_343
96	0.41	202	275	0.11	1.03	0.36	1.11	0.85	ITS_item_298
97	0.60	196	259	0.10	1.06	0.77	1.15	0.97	ITS_item_241
98	-0.07	196	296	0.13	0.83	-1.79	0.74	-2.02	ITS_item_242
99	0.38	196	267	0.12	0.89	-1.24	0.92	-0.65	ITS_item_243
100	0.09	196	305	0.11	0.89	-1.14	0.69	-1.55	ITS_item_244
101	0.43	196	262	0.12	0.92	-0.86	0.93	-0.63	ITS_item_286
102	1.67	196	156	0.10	1.74	6.52	2.09	6.64	ITS_item_287

Grade Band 3–5 Science: WINSTEPS Item Statistics

ENTRY	MEASURE	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	NAME
1	-1.02	474	938	0.06	0.82	-2.88	0.84	-1.85	ITS_item_887
2	-0.63	473	527	0.07	1.04	0.76	1.02	0.36	ITS_item_888
3	-0.94	473	593	0.07	0.94	-1.02	0.91	-1.13	ITS_item_889
4	-0.59	473	526	0.06	0.98	-0.42	0.88	-1.43	ITS_item_890
5	-0.50	473	766	0.05	1.21	3.29	1.19	2.15	ITS_item_891
6	-0.98	476	926	0.05	0.93	-1.10	0.91	-1.11	ITS_item_808
7	-0.84	466	276	0.10	1.08	2.02	1.07	1.21	ITS_item_816
8	-0.10	466	205	0.10	0.99	-0.27	0.96	-0.66	ITS_item_815
9	-0.07	466	202	0.10	0.97	-0.85	1.00	0.02	ITS_item_809
10	-0.08	466	203	0.10	1.04	1.28	1.00	0.03	ITS_item_817
11	-1.33	762	1816	0.05	0.84	-2.54	0.93	-0.75	ITS_item_767
12	-0.25	762	899	0.05	0.98	-0.47	0.88	-1.12	ITS_item_768
13	-0.92	762	1139	0.06	1.04	0.68	0.94	-0.44	ITS_item_769
14	0.55	762	562	0.05	0.77	-5.73	0.69	-3.11	ITS_item_770
15	-0.04	762	395	0.08	0.94	-1.97	0.90	-2.15	ITS_item_771
16	-0.79	1277	2700	0.04	0.87	-3.24	0.89	-1.88	ITS_item_1021
17	-0.21	1277	707	0.06	0.96	-1.51	0.92	-2.15	ITS_item_865
18	-0.42	1277	761	0.06	1.10	4.03	1.14	3.42	ITS_item_866
19	-0.14	1277	689	0.06	1.00	-0.21	0.98	-0.54	ITS_item_867
20	0.02	1277	648	0.06	0.98	-1.10	0.93	-1.84	ITS_item_868
21	-0.44	1277	764	0.06	0.99	-0.53	0.94	-1.40	ITS_item_869
22	0.26	729	346	0.08	1.03	1.02	1.17	3.51	ITS_item_829
23	-0.56	729	467	0.08	0.97	-0.90	0.93	-1.39	ITS_item_830
24	0.05	729	378	0.08	1.02	0.60	1.05	1.07	ITS_item_831
25	-0.28	729	427	0.08	0.94	-1.84	0.93	-1.41	ITS_item_833
26	0.28	729	342	0.08	0.93	-2.47	0.90	-2.08	ITS_item_834
27	1.04	727	340	0.08	1.17	6.32	1.30	7.53	ITS_item_803
28	-0.67	727	583	0.10	0.95	-0.99	0.88	-1.45	ITS_item_804
29	0.16	727	478	0.08	1.09	2.66	1.07	1.42	ITS_item_806
30	0.73	727	390	0.08	1.21	7.88	1.30	7.62	ITS_item_807
31	0.08	1406	2079	0.04	1.03	0.86	0.97	-0.60	ITS_item_755
32	-0.01	1406	2144	0.04	1.05	1.23	0.98	-0.38	ITS_item_756
33	0.60	1406	1750	0.04	0.98	-0.61	0.95	-1.04	ITS_item_758
34	0.07	1405	2138	0.04	0.98	-0.66	0.87	-1.98	ITS_item_760
35	-0.36	1406	2351	0.05	1.02	0.53	1.00	-0.01	ITS_item_911
36	0.85	1406	1558	0.04	1.24	7.63	1.30	7.48	ITS_item_766
37	-0.42	1384	2355	0.05	0.91	-1.76	0.80	-2.41	ITS_item_745
38	0.55	1381	848	0.06	0.95	-2.24	0.92	-2.73	ITS_item_748
39	0.32	1380	913	0.06	1.00	0.05	0.98	-0.59	ITS_item_751
40	0.54	1378	1804	0.04	0.86	-4.69	0.78	-4.22	ITS_item_749

41	0.17	632	932	0.06	0.82	-3.80	0.73	-3.46	ITS_item_940

ENTRY	MEASURE	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	NAME
42	0.56	632	1197	0.04	1.00	0.02	0.97	-0.55	ITS_item_941
43	0.37	632	1339	0.04	0.89	-2.24	0.79	-2.56	ITS_item_942
44	0.03	632	950	0.06	1.03	0.52	1.05	0.60	ITS_item_977
45	0.27	632	897	0.06	0.89	-2.34	0.88	-1.58	ITS_item_943
46	0.89	575	638	0.06	1.01	0.27	1.02	0.32	ITS_item_709
47	0.21	575	1313	0.05	0.84	-2.92	0.69	-3.36	ITS_item_711
48	0.44	575	783	0.06	0.84	-3.62	0.73	-4.11	ITS_item_712
49	0.02	575	1425	0.05	0.86	-1.98	0.88	-0.93	ITS_item_713
50	0.76	1146	1452	0.04	1.41	9.90	1.57	9.90	ITS_item_945
51	0.42	1146	1671	0.04	0.95	-1.31	0.97	-0.38	ITS_item_947
52	0.26	1146	1751	0.04	1.01	0.25	0.94	-0.86	ITS_item_948
53	0.96	1146	1326	0.04	1.05	1.45	1.06	1.27	ITS_item_949
54	0.65	1146	1521	0.04	0.89	-3.32	0.88	-2.38	ITS_item_950
55	0.54	1110	1530	0.04	0.94	-1.65	0.88	-2.50	ITS_item_699
56	0.69	1110	1469	0.04	1.12	3.43	1.09	1.64	ITS_item_700
57	0.13	1110	2730	0.04	1.10	1.91	1.15	1.75	ITS_item_702
58	1.49	1110	1441	0.03	1.68	9.90	1.78	9.90	ITS_item_703

Grade Band 6–8 Science: WINSTEPS Item Statistics

ENTRY	MEASURE	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	NAME
16	-0.79	1277	2700	0.04	0.87	-3.24	0.89	-1.88	ITS_item_1021
17	-0.21	1277	707	0.06	0.96	-1.51	0.92	-2.15	ITS_item_865
18	-0.42	1277	761	0.06	1.10	4.03	1.14	3.42	ITS_item_866
19	-0.14	1277	689	0.06	1.00	-0.21	0.98	-0.54	ITS_item_867
20	0.02	1277	648	0.06	0.98	-1.10	0.93	-1.84	ITS_item_868
21	-0.44	1277	764	0.06	0.99	-0.53	0.94	-1.40	ITS_item_869
31	0.08	1406	2079	0.04	1.03	0.86	0.97	-0.60	ITS_item_755
32	-0.01	1406	2144	0.04	1.05	1.23	0.98	-0.38	ITS_item_756
33	0.60	1406	1750	0.04	0.98	-0.61	0.95	-1.04	ITS_item_758
34	0.07	1405	2138	0.04	0.98	-0.66	0.87	-1.98	ITS_item_760
35	-0.36	1406	2351	0.05	1.02	0.53	1.00	-0.01	ITS_item_911
36	0.85	1406	1558	0.04	1.24	7.63	1.30	7.48	ITS_item_766
37	-0.42	1384	2355	0.05	0.91	-1.76	0.80	-2.41	ITS_item_745
38	0.55	1381	848	0.06	0.95	-2.24	0.92	-2.73	ITS_item_748
39	0.32	1380	913	0.06	1.00	0.05	0.98	-0.59	ITS_item_751
40	0.54	1378	1804	0.04	0.86	-4.69	0.78	-4.22	ITS_item_749
50	0.76	1146	1452	0.04	1.41	9.90	1.57	9.90	ITS_item_945
51	0.42	1146	1671	0.04	0.95	-1.31	0.97	-0.38	ITS_item_947
52	0.26	1146	1751	0.04	1.01	0.25	0.94	-0.86	ITS_item_948
53	0.96	1146	1326	0.04	1.05	1.45	1.06	1.27	ITS_item_949
54	0.65	1146	1521	0.04	0.89	-3.32	0.88	-2.38	ITS_item_950
55	0.54	1110	1530	0.04	0.94	-1.65	0.88	-2.50	ITS_item_699
56	0.69	1110	1469	0.04	1.12	3.43	1.09	1.64	ITS_item_700
57	0.13	1110	2730	0.04	1.10	1.91	1.15	1.75	ITS_item_702
58	1.49	1110	1441	0.03	1.68	9.90	1.78	9.90	ITS_item_703
59	-1.55	428	919	0.06	1.24	3.12	1.64	5.73	ITS_item_787
60	-0.46	428	208	0.11	1.11	2.64	1.15	2.25	ITS_item_789
61	-0.44	428	206	0.11	0.94	-1.53	0.93	-1.16	ITS_item_790
62	0.37	428	138	0.11	1.08	1.65	1.12	1.29	ITS_item_791
63	-0.30	428	194	0.11	1.00	0.02	1.02	0.28	ITS_item_793
64	0.03	428	166	0.11	0.99	-0.25	0.92	-1.05	ITS_item_794
65	-1.03	304	561	0.07	1.00	0.03	1.13	1.27	ITS_item_840
66	-0.04	304	220	0.08	1.07	0.99	1.03	0.28	ITS_item_841
67	-0.51	304	293	0.08	1.08	1.16	1.03	0.30	ITS_item_843
68	-0.27	304	258	0.08	0.96	-0.65	0.89	-1.14	ITS_item_844
69	-0.63	304	314	0.08	1.14	1.99	1.11	0.96	ITS_item_845
70	-0.94	517	1119	0.06	0.97	-0.37	1.03	0.35	ITS_item_870
71	-0.36	517	298	0.10	1.01	0.37	0.96	-0.69	ITS_item_871
72	-0.08	517	269	0.10	1.09	2.45	1.11	1.72	ITS_item_872
73	0.06	517	255	0.10	1.04	1.04	1.03	0.43	ITS_item_873

74	-0.11	517	273	0.10	1.02	0.44	0.96	-0.58	ITS_item_874

ENTRY	MEASURE	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	NAME
75	0.30	517	230	0.10	1.09	2.38	1.18	2.56	ITS_item_875
76	-1.14	627	1414	0.05	0.93	-1.12	0.99	-0.11	ITS_item_716
77	-0.14	627	326	0.09	0.98	-0.53	0.91	-1.57	ITS_item_719
78	-0.13	627	325	0.09	0.92	-2.34	0.87	-2.47	ITS_item_725
79	-0.12	627	323	0.09	0.93	-2.27	0.88	-2.25	ITS_item_728
80	-0.19	627	332	0.09	0.95	-1.66	0.91	-1.65	ITS_item_722
81	-0.52	960	735	0.08	1.01	0.23	0.99	-0.17	ITS_item_965
82	-0.35	960	1519	0.05	0.93	-1.36	0.79	-2.10	ITS_item_966
83	-0.49	960	730	0.08	0.85	-3.85	0.75	-3.66	ITS_item_967
84	0.31	960	1212	0.05	0.82	-4.75	0.75	-5.13	ITS_item_968
85	-0.16	960	677	0.08	0.92	-2.33	0.84	-2.72	ITS_item_969
86	-0.57	754	1337	0.07	0.81	-2.40	0.56	-2.98	ITS_item_846
87	0.06	754	1825	0.04	0.87	-2.12	0.65	-2.68	ITS_item_847
88	0.32	754	1657	0.04	0.98	-0.32	0.82	-1.74	ITS_item_848
89	0.27	754	1064	0.05	1.09	1.90	1.24	3.09	ITS_item_849
90	-0.19	839	2216	0.05	0.96	-0.47	0.99	-0.04	ITS_item_1009
91	0.90	839	1570	0.04	1.18	3.91	1.22	3.58	ITS_item_1011
92	-0.12	839	1405	0.06	0.94	-0.95	0.85	-1.37	ITS_item_1010
93	-0.06	839	1348	0.06	0.82	-3.63	0.67	-4.52	ITS_item_1013

Grade 10 Science: WINSTEPS Item Statistics

ENTRY	MEASURE	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	NAME
59	-1.55	428	919	0.06	1.24	3.12	1.64	5.73	ITS_item_787
60	-0.46	428	208	0.11	1.11	2.64	1.15	2.25	ITS_item_789
61	-0.44	428	206	0.11	0.94	-1.53	0.93	-1.16	ITS_item_790
62	0.37	428	138	0.11	1.08	1.65	1.12	1.29	ITS_item_791
63	-0.30	428	194	0.11	1.00	0.02	1.02	0.28	ITS_item_793
64	0.03	428	166	0.11	0.99	-0.25	0.92	-1.05	ITS_item_794
76	-1.14	627	1414	0.05	0.93	-1.12	0.99	-0.11	ITS_item_716
77	-0.14	627	326	0.09	0.98	-0.53	0.91	-1.57	ITS_item_719
78	-0.13	627	325	0.09	0.92	-2.34	0.87	-2.47	ITS_item_725
79	-0.12	627	323	0.09	0.93	-2.27	0.88	-2.25	ITS_item_728
80	-0.19	627	332	0.09	0.95	-1.66	0.91	-1.65	ITS_item_722
81	-0.52	960	735	0.08	1.01	0.23	0.99	-0.17	ITS_item_965
82	-0.35	960	1519	0.05	0.93	-1.36	0.79	-2.10	ITS_item_966
83	-0.49	960	730	0.08	0.85	-3.85	0.75	-3.66	ITS_item_967
84	0.31	960	1212	0.05	0.82	-4.75	0.75	-5.13	ITS_item_968
85	-0.16	960	677	0.08	0.92	-2.33	0.84	-2.72	ITS_item_969
90	-0.19	839	2216	0.05	0.96	-0.47	0.99	-0.04	ITS_item_1009
91	0.90	839	1570	0.04	1.18	3.91	1.22	3.58	ITS_item_1011
92	-0.12	839	1405	0.06	0.94	-0.95	0.85	-1.37	ITS_item_1010
93	-0.06	839	1348	0.06	0.82	-3.63	0.67	-4.52	ITS_item_1013
94	-0.96	166	377	0.10	0.94	-0.39	0.91	-0.34	ITS_item_894
95	-0.60	166	107	0.18	0.91	-1.10	0.82	-1.34	ITS_item_1023
96	-0.60	166	107	0.18	0.85	-1.94	0.73	-2.13	ITS_item_895
97	-0.19	166	94	0.18	0.82	-2.86	0.72	-2.64	ITS_item_896
98	0.27	166	158	0.12	0.92	-0.91	0.85	-1.26	ITS_item_898
99	-0.88	158	114	0.19	1.07	0.82	1.06	0.44	ITS_item_957
100	0.23	158	160	0.11	1.04	0.45	1.05	0.42	ITS_item_959
101	0.22	157	80	0.17	0.92	-1.34	0.87	-1.46	ITS_item_958
102	0.06	157	172	0.12	0.97	-0.34	0.90	-0.79	ITS_item_960
103	-0.21	158	196	0.11	1.01	0.12	0.86	-0.83	ITS_item_963
104	-0.19	254	403	0.11	0.94	-0.65	0.83	-0.94	ITS_item_970
105	0.80	254	296	0.09	0.99	-0.06	0.97	-0.25	ITS_item_971
106	0.35	254	168	0.14	1.16	2.57	1.34	2.83	ITS_item_972
107	0.60	254	311	0.10	1.08	1.02	1.15	1.65	ITS_item_973
108	-0.46	242	406	0.12	0.96	-0.30	0.77	-1.26	ITS_item_877
109	1.67	242	100	0.14	1.25	3.96	1.35	4.01	ITS_item_878
110	0.34	242	165	0.15	0.99	-0.21	0.95	-0.42	ITS_item_879
111	0.06	242	366	0.11	1.02	0.27	1.07	0.54	ITS_item_880
112	0.27	242	347	0.10	1.01	0.15	0.95	-0.31	ITS_item_881
113	-0.20	237	399	0.11	0.90	-0.86	0.70	-1.18	ITS_item_732

114	0.12	237	172	0.16	0.95	-0.77	0.81	-1.43	ITS_item_738

ENTRY	MEASURE	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	NAME
115	0.19	237	169	0.15	0.91	-1.42	0.81	-1.51	ITS_item_741
116	-0.83	237	204	0.20	0.90	-0.76	0.66	-1.53	ITS_item_1022
117	-0.39	237	191	0.17	0.93	-0.74	0.73	-1.59	ITS_item_743
118	0.66	232	305	0.09	0.92	-1.03	0.81	-1.39	ITS_item_785
119	0.47	232	316	0.10	1.07	0.82	1.04	0.37	ITS_item_786
120	0.75	232	291	0.10	0.91	-1.17	0.82	-1.63	ITS_item_788
121	0.07	232	357	0.11	1.01	0.19	0.97	-0.14	ITS_item_792
122	-0.50	206	173	0.20	0.90	-0.79	0.72	-1.36	ITS_item_1003
123	1.76	206	170	0.10	1.78	7.66	2.04	7.87	ITS_item_1004
124	0.98	206	245	0.10	0.86	-1.86	0.85	-1.47	ITS_item_1005
125	1.07	206	117	0.15	1.03	0.53	1.00	0.00	ITS_item_1006
126	-0.45	192	161	0.20	0.94	-0.46	0.81	-0.81	ITS_item_994
127	-0.29	192	157	0.20	0.97	-0.19	0.90	-0.44	ITS_item_995
128	0.29	192	140	0.17	1.00	0.09	0.93	-0.42	ITS_item_996
129	1.39	192	98	0.16	1.23	3.80	1.35	3.95	ITS_item_997

Grade Band 3–5 Social Studies: Field Test WINSTEPS Item Statistics

ENTRY	MEASURE	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	NAME
1	-1.18	575	964	0.05	1.19	3.19	1.47	5.74	ITS_item_1148
2	-1.06	575	303	0.09	1.13	3.38	1.17	2.79	ITS_item_1060
3	-0.43	575	231	0.09	1.10	2.70	1.17	2.33	ITS_item_1061
4	-1.22	555	314	0.10	1.08	2.04	1.12	1.93	ITS_item_1063
5	-0.28	575	214	0.10	1.08	2.00	1.03	0.48	ITS_item_1062
6	-1.45	563	1046	0.05	0.95	-0.77	1.02	0.25	ITS_item_1083
7	-1.08	563	296	0.09	0.98	-0.65	0.95	-0.75	ITS_item_1084
8	-1.13	563	302	0.09	1.00	-0.12	0.98	-0.40	ITS_item_1085
9	-1.04	563	292	0.09	0.95	-1.37	0.90	-1.66	ITS_item_1086
10	-1.27	335	585	0.07	0.92	-1.05	1.19	1.85	ITS_item_1095
11	-1.42	335	200	0.13	0.95	-0.89	0.94	-0.71	ITS_item_1096
12	-0.08	335	113	0.13	1.00	-0.04	0.95	-0.39	ITS_item_1098
13	-0.87	335	164	0.12	0.87	-2.96	0.81	-2.34	ITS_item_1100
14	-0.98	316	516	0.07	0.93	-0.86	1.06	0.61	ITS_item_1175
15	-0.35	316	128	0.13	0.98	-0.43	0.90	-1.04	ITS_item_1176
16	-0.51	316	138	0.13	0.96	-0.96	0.89	-1.21	ITS_item_1177
17	-0.18	315	117	0.13	0.99	-0.20	1.02	0.25	ITS_item_1178
18	-1.21	654	1420	0.05	1.10	1.47	1.15	1.69	ITS_item_1131
19	-0.90	654	415	0.09	0.94	-1.42	0.88	-1.88	ITS_item_1133
20	-0.87	654	411	0.09	0.92	-2.00	0.85	-2.51	ITS_item_1134
21	-0.66	654	386	0.09	0.92	-2.08	0.87	-2.26	ITS_item_1135
22	-1.22	1029	746	0.08	1.07	1.68	0.98	-0.25	ITS_item_1027
23	-0.54	1029	1294	0.04	1.02	0.57	1.01	0.16	ITS_item_1032
24	-0.65	1012	631	0.07	0.93	-2.31	0.89	-2.56	ITS_item_1034
25	-0.54	1029	1299	0.04	1.04	1.00	1.10	1.49	ITS_item_1033
26	-0.35	958	1144	0.05	0.97	-0.79	0.95	-0.84	ITS_item_1166
27	-0.45	958	1214	0.04	0.89	-2.82	0.81	-2.81	ITS_item_1167
28	-0.40	958	1200	0.04	0.82	-4.84	0.69	-4.22	ITS_item_1168
29	-0.23	958	1087	0.05	0.90	-2.76	0.85	-2.68	ITS_item_1169
30	0.06	721	817	0.06	1.05	1.26	1.07	1.47	ITS_item_1101
31	0.42	716	693	0.06	1.08	1.85	1.08	1.79	ITS_item_1102
32	0.23	721	380	0.08	1.02	1.02	1.01	0.44	ITS_item_1103
33	0.36	716	709	0.05	1.00	-0.04	0.99	-0.15	ITS_item_1104
34	0.29	409	214	0.10	1.02	0.59	1.02	0.53	ITS_item_1197
35	0.58	409	187	0.10	1.01	0.25	1.01	0.21	ITS_item_1199
36	-0.14	409	253	0.11	1.11	3.27	1.17	3.16	ITS_item_1200
37	-0.11	409	250	0.11	0.99	-0.42	1.00	0.03	ITS_item_1196
38	0.34	381	395	0.07	0.98	-0.44	0.93	-1.07	ITS_item_1125
39	-0.43	381	566	0.07	1.11	1.71	1.12	1.08	ITS_item_1126
40	-0.14	381	509	0.07	0.91	-1.76	0.82	-2.01	ITS_item_1127

41	-0.41	381	564	0.07	0.88	-1.98	0.75	-2.40	ITS_item_1128

ENTRY	MEASURE	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	NAME
42	-0.47	381	543	0.08	0.84	-2.68	0.79	-2.81	ITS_item_1129
43	0.11	722	479	0.08	0.88	-3.81	0.82	-4.03	ITS_item_1105
44	0.32	720	954	0.05	0.77	-5.63	0.67	-4.91	ITS_item_1116
45	0.26	720	456	0.08	0.99	-0.39	0.97	-0.64	ITS_item_1118
46	0.12	720	476	0.08	1.16	4.57	1.21	4.16	ITS_item_1120
47	0.23	703	939	0.05	0.86	-3.18	0.82	-3.27	ITS_item_1157
48	0.03	703	479	0.09	1.05	1.52	1.11	2.15	ITS_item_1158
49	0.67	703	386	0.08	1.07	2.55	1.07	1.94	ITS_item_1159
50	0.43	703	886	0.05	0.87	-3.08	0.80	-3.28	ITS_item_1160
51	-0.10	1212	2997	0.04	0.86	-2.97	0.70	-4.21	ITS_item_1174
52	-0.03	1212	3086	0.04	0.83	-3.24	0.58	-4.35	ITS_item_1171
53	-0.47	1212	3246	0.05	0.88	-1.89	0.65	-3.71	ITS_item_1172
54	-0.37	1212	2124	0.05	0.84	-2.69	0.63	-3.71	ITS_item_1173
55	0.61	1186	735	0.06	1.03	1.34	1.01	0.41	ITS_item_1087
56	1.24	1186	569	0.06	0.93	-3.89	0.91	-3.63	ITS_item_1088
57	0.87	1186	666	0.06	1.05	2.48	1.04	1.47	ITS_item_1089
58	1.03	1186	624	0.06	1.08	4.17	1.09	3.42	ITS_item_1090
59	0.21	455	693	0.07	0.96	-0.53	0.90	-1.14	ITS_item_1065
60	1.02	455	499	0.06	1.30	5.88	1.44	6.88	ITS_item_1066
61	1.19	455	455	0.07	1.04	0.85	1.05	1.01	ITS_item_107

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62	0.63	455	611	0.06	0.90	-1.97	0.85	-2.03	ITS_item_1078
63	0.89	1029	1209	0.04	1.14	4.03	1.20	5.00	ITS_item_1093
64	0.44	1029	1416	0.05	1.07	1.75	1.07	1.49	ITS_item_1092
65	0.86	1029	1214	0.05	1.15	4.27	1.16	4.21	ITS_item_1094
66	0.71	1029	1343	0.04	0.86	-4.29	0.84	-3.55	ITS_item_1091
67	-0.13	1020	1726	0.05	0.94	-0.93	0.79	-2.39	ITS_item_1077
68	0.37	1021	1440	0.05	1.03	0.71	1.02	0.51	ITS_item_1079
69	0.18	1020	1592	0.05	1.00	-0.01	0.95	-0.67	ITS_item_1080
70	0.05	1021	1687	0.05	0.86	-2.60	0.73	-3.22	ITS_item_1081
71	0.96	434	490	0.07	1.18	3.43	1.21	3.52	ITS_item_1108
72	0.73	434	566	0.06	1.10	1.82	1.15	1.96	ITS_item_1109
73	0.86	434	510	0.07	0.95	-1.00	0.92	-1.49	ITS_item_1110
74	0.43	434	615	0.07	0.91	-1.60	0.88	-1.63	ITS_item_1112
75	0.77	434	530	0.07	0.94	-1.12	0.94	-1.01	ITS_item_1207
76	0.60	434	278	0.10	0.95	-1.36	0.94	-1.26	ITS_item_1208
77	1.05	427	472	0.06	1.35	6.70	1.43	6.27	ITS_item_1130
78	1.17	427	440	0.07	1.14	2.66	1.13	2.24	ITS_item_1137
79	1.47	427	190	0.10	1.01	0.36	1.00	-0.05	ITS_item_1139
80	0.73	427	262	0.10	1.05	1.51	1.06	1.24	ITS_item_1140
81	0.87	427	515	0.06	1.18	3.44	1.19	2.81	ITS_item_1141
82	1.70	427	168	0.10	1.04	1.23	1.08	1.81	ITS_item_1142

Grade Band 6–8 Social Studies: Field Test WINSTEPS Item Statistics

ENTRY	MEASURE	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	NAME
42	-0.47	381	543	0.08	0.84	-2.68	0.79	-2.81	ITS_item_1129
43	0.11	722	479	0.08	0.88	-3.81	0.82	-4.03	ITS_item_1105
44	0.32	720	954	0.05	0.77	-5.63	0.67	-4.91	ITS_item_1116
45	0.26	720	456	0.08	0.99	-0.39	0.97	-0.64	ITS_item_1118
46	0.12	720	476	0.08	1.16	4.57	1.21	4.16	ITS_item_1120
47	0.23	703	939	0.05	0.86	-3.18	0.82	-3.27	ITS_item_1157
48	0.03	703	479	0.09	1.05	1.52	1.11	2.15	ITS_item_1158
49	0.67	703	386	0.08	1.07	2.55	1.07	1.94	ITS_item_1159
50	0.43	703	886	0.05	0.87	-3.08	0.80	-3.28	ITS_item_1160
63	0.89	1029	1209	0.04	1.14	4.03	1.20	5.00	ITS_item_1093
64	0.44	1029	1416	0.05	1.07	1.75	1.07	1.49	ITS_item_1092
65	0.86	1029	1214	0.05	1.15	4.27	1.16	4.21	ITS_item_1094
66	0.71	1029	1343	0.04	0.86	-4.29	0.84	-3.55	ITS_item_1091
67	-0.13	1020	1726	0.05	0.94	-0.93	0.79	-2.39	ITS_item_1077
68	0.37	1021	1440	0.05	1.03	0.71	1.02	0.51	ITS_item_1079
69	0.18	1020	1592	0.05	1.00	-0.01	0.95	-0.67	ITS_item_1080
70	0.05	1021	1687	0.05	0.86	-2.60	0.73	-3.22	ITS_item_1081
71	0.96	434	490	0.07	1.18	3.43	1.21	3.52	ITS_item_1108
72	0.73	434	566	0.06	1.10	1.82	1.15	1.96	ITS_item_1109
73	0.86	434	510	0.07	0.95	-1.00	0.92	-1.49	ITS_item_1110

74	0.43	434	615	0.07	0.91	-1.60	0.88	-1.63	ITS_item_1112
51	-0.10	1212	2997	0.04	0.86	-2.97	0.70	-4.21	ITS_item_1174
52	-0.03	1212	3086	0.04	0.83	-3.24	0.58	-4.35	ITS_item_1171
53	-0.47	1212	3246	0.05	0.88	-1.89	0.65	-3.71	ITS_item_1172
54	-0.37	1212	2124	0.05	0.84	-2.69	0.63	-3.71	ITS_item_1173
55	0.61	1186	735	0.06	1.03	1.34	1.01	0.41	ITS_item_1087
56	1.24	1186	569	0.06	0.93	-3.89	0.91	-3.63	ITS_item_1088
57	0.87	1186	666	0.06	1.05	2.48	1.04	1.47	ITS_item_1089
58	1.03	1186	624	0.06	1.08	4.17	1.09	3.42	ITS_item_1090
63	0.89	1029	1209	0.04	1.14	4.03	1.20	5.00	ITS_item_1093
64	0.44	1029	1416	0.05	1.07	1.75	1.07	1.49	ITS_item_1092
65	0.86	1029	1214	0.05	1.15	4.27	1.16	4.21	ITS_item_1094
66	0.71	1029	1343	0.04	0.86	-4.29	0.84	-3.55	ITS_item_1091
67	-0.13	1020	1726	0.05	0.94	-0.93	0.79	-2.39	ITS_item_1077
68	0.37	1021	1440	0.05	1.03	0.71	1.02	0.51	ITS_item_1079
69	0.18	1020	1592	0.05	1.00	-0.01	0.95	-0.67	ITS_item_1080
70	0.05	1021	1687	0.05	0.86	-2.60	0.73	-3.22	ITS_item_1081
83	-1.12	230	385	0.08	0.89	-1.28	0.97	-0.25	ITS_item_1049
84	-0.65	230	101	0.15	0.98	-0.36	0.91	-0.92	ITS_item_1051
85	-0.36	230	88	0.15	0.99	-0.21	0.99	-0.07	ITS_item_1050
86	-0.16	230	79	0.15	1.04	0.72	1.02	0.17	ITS_item_1053

ENTRY	MEASURE	COUNT	SCORE	ERROR	IN.MSQ	IN.ZSTD	OUT.MS	OUT.ZSTD	NAME
87	-1.23	223	384	0.08	0.91	-1.07	1.02	0.19	ITS_item_1183
88	-0.61	223	98	0.15	1.11	2.06	1.14	1.55	ITS_item_1188
89	-0.63	223	99	0.15	0.98	-0.34	0.95	-0.48	ITS_item_1184
90	-0.52	223	94	0.15	1.00	0.09	1.01	0.18	ITS_item_1185
91	-1.06	433	891	0.06	0.98	-0.33	1.04	0.49	ITS_item_1106
92	-1.00	433	282	0.11	0.96	-0.79	0.91	-1.16	ITS_item_1107
93	-0.60	433	249	0.11	1.03	0.60	1.04	0.62	ITS_item_1115
94	-0.06	433	201	0.11	1.04	1.09	1.15	2.10	ITS_item_1114
95	-0.02	302	172	0.12	0.99	-0.38	0.96	-0.65	ITS_item_1149
96	-0.10	302	177	0.12	0.89	-3.06	0.85	-2.79	ITS_item_1150
97	-0.75	302	217	0.13	0.99	-0.10	0.97	-0.33	ITS_item_1152
98	-0.41	302	197	0.13	1.08	1.65	1.08	1.16	ITS_item_1153
99	-0.52	257	390	0.09	0.95	-0.52	0.86	-1.05	ITS_item_1059
100	0.03	257	314	0.08	0.89	-1.75	0.81	-2.12	ITS_item_1067
101	0.09	257	294	0.09	0.86	-2.05	0.84	-2.27	ITS_item_1068
102	-0.38	257	347	0.10	0.91	-1.18	0.87	-1.55	ITS_item_1070
103	-0.21	749	1232	0.06	0.82	-3.00	0.61	-3.81	ITS_item_1143
104	0.06	749	1130	0.06	1.16	3.08	1.17	1.95	ITS_item_1144
105	1.08	749	734	0.05	1.04	0.99	1.03	0.73	ITS_item_1145
106	-0.28	746	1177	0.06	0.84	-2.99	0.74	-3.69	ITS_item_114

									6
107	-0.17	749	557	0.09	0.93	-1.59	0.88	-1.88	ITS_item_1147
108	0.86	742	802	0.05	1.23	5.16	1.25	5.11	ITS_item_1028
109	0.90	742	786	0.06	1.06	1.40	1.06	1.32	ITS_item_1029
110	0.72	742	862	0.05	1.27	6.19	1.34	6.04	ITS_item_1030
111	1.32	742	638	0.05	1.27	6.23	1.34	6.20	ITS_item_1031
112	-3.24	579	571	0.36	0.94	-0.05	0.49	-1.32	ITS_item_1055
113	0.54	579	809	0.06	0.90	-2.08	0.84	-2.31	ITS_item_1056
114	1.38	579	546	0.06	1.31	6.28	1.34	6.44	ITS_item_1057
115	1.08	579	632	0.06	1.07	1.70	1.06	1.18	ITS_item_1058
116	0.71	572	744	0.06	0.95	-1.16	0.93	-1.10	ITS_item_1190
117	0.36	572	860	0.06	0.88	-2.22	0.80	-2.41	ITS_item_1191
118	0.34	572	399	0.10	1.09	2.22	1.16	2.79	ITS_item_1209
119	0.64	572	364	0.09	1.06	1.92	1.05	1.07	ITS_item_1193
120	0.58	572	770	0.06	1.11	2.14	1.19	2.90	ITS_item_1192
121	-0.03	570	934	0.07	0.95	-0.70	0.84	-1.56	ITS_item_1119
122	0.80	570	707	0.06	0.89	-2.51	0.86	-2.63	ITS_item_1121
123	0.46	570	384	0.09	1.05	1.43	1.04	0.88	ITS_item_1122
124	0.92	570	329	0.09	1.05	1.83	1.07	1.99	ITS_item_1123
125	0.56	570	373	0.09	1.08	2.31	1.10	1.96	ITS_item_1124

Appendix G: Marginal Reliability by Grade Band, Subject, and Starting Task

Table G-1. Marginal Reliability by Starting Task and Grade Band for ELA

Grade Band	Initial Task	N	Reliability
Grade 3–5	1	413	0.87725
Grade 3–5	3	266	0.87028
Grade 3–5	6	383	0.78550
Grade 6–8	1	294	0.87720
Grade 6–8	3	182	0.90558
Grade 6–8	6	497	0.75792
Grade 10	1	98	0.84854
Grade 10	3	60	0.84201
Grade 10	6	173	0.78891

Table G-2. Marginal Reliability by Starting Task and Grade Band for Mathematics

Grade Band	Initial Task	N	Reliability
Grade 3–5	1	390	0.82742
Grade 3–5	3	309	0.85406
Grade 3–5	6	360	0.75342
Grade 6–8	1	278	0.82026
Grade 6–8	3	216	0.88044
Grade 6–8	6	476	0.78283
Grade 10	1	98	0.85380
Grade 10	3	80	0.83415
Grade 10	6	152	0.81751

Tables G-3. Marginal Reliability by Starting Task and Grade Band for Science

Grade Band	Initial Task	N	Reliability
Grade 3–5	1	487	0.87055
Grade 3–5	3	289	0.86875
Grade 3–5	6	266	0.76463
Grade 6–8	1	334	0.85512
Grade 6–8	3	219	0.85793
Grade 6–8	6	423	0.75109
Grade 10	1	121	0.83955
Grade 10	3	62	0.85884
Grade 10	6	149	0.78320

Appendix H: Score Report Sample

INDIVIDUAL STUDENT REPORT

Prepared Especially for the Family of
Kyree Adams

Date of Birth:	9-20-1997
Student ID:	587412589457
School District:	Calvert
School:	Alfonso Elementary School

Spring 2007

The South Carolina Alternate Assessment (SC-Alt)

Kyree participated in the South Carolina Alternate Assessment (SC-Alt) during the Spring of 2007.

She took the elementary school form of the test, which is based on academic standards from grades 3 to 5. This report is designed to provide you with information on your child's performance on this assessment.

The SC-Alt is a test designed for students with significant cognitive disabilities who participate in a school curriculum that includes academic and functional skill instruction. The alternate assessment only tests students' achievement in English language arts (ELA), mathematics, science, and social studies. Individualized education program (IEP) reports and other methods provide parents with information on how students are progressing in the other areas.

What is the SC-Alt?

- The SC–Alt is an assessment that includes a series of performance tasks in each subject area that allows students to respond by using their typical method of communication. This may include pointing and gazing at the correct response, selecting objects, pictures or picture symbols that represent the correct answer, or reading letters, words or sentences to complete a task.
- The tasks are linked to the academic content standards in four areas: English language arts (ELA), mathematics, science, and social studies. Academic standards are general statements of what students should know and be able to do when they complete each grade.
- Students are assigned a test form based on their age: ages 8–10 (elementary), ages 11–13 (middle), or age 15 (high school).

The South Carolina Department of Education

The SC-Alt

Mathematics

Kyree scored at Level 3 in mathematics.

Students who score at Level 3 should be able to:

- add and subtract simple numbers;
- count and compare objects in a group;
- compare objects by color, size, or shape;
- identify three dimensional shapes;
- read information in a graph.

	4	Students performing at Level **4** demonstrate and apply academic skills and competencies in mathematics.
Your Child's Level	3	Students performing at Level 3 demonstrate increasing academic skills and competencies in mathematics.
	2	Students performing at Level **2** demonstrate foundational academic skills and competencies in mathematics.
	1	Students performing at Level **1** may demonstrate emerging academic skills and competencies in mathematics.

How you can support Kyree's learning

- Encourage your child to add and subtract during everyday activities. For example, show her 5 cookies or other objects and take 2 away. Then, ask her to tell you how many are left (5 2–3).
- Play games that require counting spaces and adding points for the score. For example, if you spin a 5, your child must move her game piece 5 places.
- Describe everyday household objects by shapes. For example, the window is a large rectangle.

English Language Arts

Kyree scored at Level 4 in ELA.

Students who score at Level 4 should be able to:

- identify the main idea and make predictions about what will happen next in a story;
- write a simple story;
- follow multi step directions;
- take turns appropriately during conversations.

Your Child's Level	4	Students performing at Level 4 demonstrate and apply academic skills and competencies in reading, writing, and communication.
	3	Students performing at Level **3** demonstrate increasing academic skills and competencies in reading, writing, and communication.
	2	Students performing at Level **2** demonstrate foundational academic skills and competencies in reading, writing, and communication.
	1	Students performing at Level **1** may demonstrate emerging academic skills and competencies in reading, writing, and communication.

How you can support Kyree's learning

- Encourage your child to read passages from a variety of materials (books, magazines, or newspapers).
- Read a story with your child and talk to her about specific characters and the order of events in the story. Ask her what she thinks will happen next.
- Assist your child in writing a letter or note to a family member or friend. You can use pictures, words, or tactile means, such as Braille.
- Encourage your child to participate in conversations with friends and family using words, pictures, or assistive technology devices.

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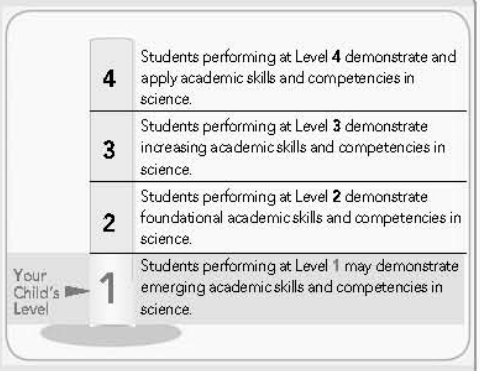
Science

Kyree scored at Level 1 in science.

Students who score at Level 1 should be able to:

- observe daily weather conditions;
- recognize day and night;
- observe objects in motion.



How you can support Kyree's learning

- Talk to your child about the weather conditions each day. For example, take her outside to feel the rain.
- Point out the moon in the sky.
- Talk to your child about what we do in the daytime and at night. For example, we sleep at night.
- Roll a ball across a table or the floor and talk about how fast it is going.

Frequently Asked Questions

How are scores reported and used?

- Four achievement levels (Level 1, Level 2, Level 3, and Level 4) have been established for the SC-Alt. These levels are described for each subject area.
- The information on what your child should know and be able to do in each of these levels is the most important information to you. SC-Alt is also an accountability measure that provides information on how schools and districts are doing.
- Level 2 is the achievement level reported as meeting the basic requirements on the school report card. Levels 3 and 4 are reported as proficient for Adequate Yearly Progress (AYP).
- Although students were tested in social studies, these scores will not be reported or counted this year.

Last year, my child participated in PACT-Alt. What happened to PACT-Alt?

- During the 2006-07 school year, the SC-Alt replaced PACT-Alt. The Palmetto Achievement Challenge Tests Alternate Assessment (PACT-Alt) was a portfolio assessment that allowed teachers to collect information across the year on your child's progress. Although this provided useful information, it did not provide an opportunity for your child to show what he/she knows and can do in a variety of academic areas. PACT-Alt provided in-depth information on one or two standards, but SC-Alt provides a picture of how students are doing on instruction in a variety of standards throughout the year.

For more information about testing and assessment of students with disabilities, visit http://ed.sc.gov/agency/offices/assessment/programs/SWD/.

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Spring 2007
Kyree Adams

The SC-Alt

The following areas are tested in Mathematics:

Number and Operations involves:
Studying numbers, relationships among numbers and number systems and the meanings of operations (addition, subtraction etc.) and how they relate to one another.
Examples include:
- using numbers to identify dates, street addresses, phone numbers, locker numbers, and recipe additions
- using addition to determine how many more coins are needed to make a purchase

Algebra involves:
Studying patterns, relations, and functions.
Examples include:
- finding and creating patterns
- using patterns to make predictions
- answering questions such as "We have 3 napkins. How many more napkins are needed if 5 people are coming for dinner?"

Geometry involves:
Studying characteristics and properties of two- and three-dimensional geometric shapes.
Examples include:
- using directional vocabulary
- manipulating and measuring shapes

Measurement involves:
Studying the measurable attributes of objects and the units, systems, and processes of measurement and appropriate techniques and tools for measuring.
Examples include:
- using a ruler to measure length of different items

Data Analysis and Probability involves:
Formulating questions that can be addressed with data; collecting, organizing, and displaying relevant data; understanding and using basic concepts of probability.
Examples include:
- tallying and graphing data to monitor own behavior
- asking questions that can be answered with data

The following areas are tested in English Language Arts:

Reading involves:
- Reading process and comprehension
- Analysis of texts
- Word study and analysis

Examples include receiving and understanding information from literacy materials such as:
- objects
- pictures or photographs
- picture symbols
- letters, words and sentences in print or Braille
- text that is read aloud

Writing involves:
- Writing process
- Responding to text
- Legibility

Examples include:
- dictating the content of a story to a scribe
- arranging objects, photographs, pictures and picture symbols in order of sequence of events to create a report
- using paper and pencil or assistive technology device to write a story

Communication* involves:
Speaking, listening, and viewing to recognize, demonstrate, and analyze the qualities of effective communication. It is the exchange of information between two or more people.
Examples include:
- using body language, gesturing, vocalizing, signing, or talking to convey meaning
- using body language to indicate understanding
- pointing to the appropriate object on a communication board to indicate time for the next activity
- following two-step oral directions

*Communication may be facilitated by using objects, photographs, pictures, picture symbols, words, and voice output devices or other assistive technology.

The following areas are tested in Science:

Scientific Inquiry involves:
Studying scientific processes and skills.
Examples include:
- classifying objects by their properties (characteristics or attributes)
- classifying objects in sequential order
- predicting what will happen next in a simple investigation or experiment
- using tools accurately and appropriately to gather information
- gaining information from graphs, tables and diagrams

Life Science involves:
Studying the basic needs of plants and animals, their structures and their habitats.
Examples include:
- planting a seed in soil and understanding that it needs water to grow
- sorting pictures into categories of plants or animals

Earth Science involves:
Studying weather, objects in the sky (such as the sun and moon), and earth materials (such as rocks and soil).
Examples include:
- using picture symbols to indicate if it is a sunny day or rainy day
- sorting rocks into different categories

Physical Science involves:
Studying properties (characteristics) of objects, the effect of force on the motion of objects, light, heat, and electricity.
Examples include:
- making a ball roll fast by pushing it hard
- classifying solids and liquids